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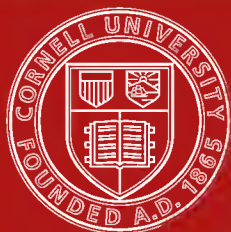


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PERSONNEL ADMINISTRATION

ITS PRINCIPLES AND PRACTICE

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BY

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AND

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FIRST EDITION

McGRAW-HILL BOOK COMPANY, Inc.

NEW YORK: 239 WEST 39TH STREET

LONDON: 6 & 8 BOUVERIE ST., E. C. 4

1920

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D 234 (3)

AA92234

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THE MEMORY OF
ROBERT GROSVENOR VALENTINE

A pioneer in personnel administration.
A devotee of science in the service of
democracy.

“We are staggered today by the great
new forces apparently adrift in the
world. These forces become manage-
able before the attack of the scientific
mind humanly purposed.”

R. G. V.

PREFACE

The purpose of this book is to set forth the principles and the best prevailing practice in the field of the administration of human relations in industry. It is addressed to employers, personnel executives and employment managers, and to students of personnel administration whether they are in schools of business administration or already in industry in some executive capacity. But we hope that it will have value, also, for all—managers, workers, consumers—who are interested to advance right human relations in industry, and to secure a productivity which is due to willing human cooperation, interest and creative power.

The field of administrative activity covered by the book includes all those efforts usually included in personnel management; employment, health and safety, training, personnel research, service features and joint relations. And we seek, also, to show the relation of the personnel problems of each corporation to those of its industry as whole, by considering in conclusion the activities of employers' associations and the dealings which they may have with organizations of workers on a district or national scale.

We may be questioned for our temerity in affirming "principles" and "standard practice" thus early in the development of a relatively new field of specialized effort. But these principles grow out of modern knowledge of human nature and its constituent elements—not out of transient industrial conditions. Administrators are dealing with human beings—personalities whose inherent tendencies and impulses, whose characteristic reactions, whose hopes and aspirations, are being revealed by the study of human behavior. And determination as to how industrial procedure can be best adapted to this human nature which is the animating power of industry, is therefore conditioned primarily by our knowledge of that nature, and a knowledge of the critical points of its suppression, conflict and maladjustment in industry.

On the whole it is also true that the principles underlying successful practice in the administration of personnel activities,

apply independently of the larger economic issues which, however, cannot be wholly excluded from a study of this kind. Under any or all systems of industrial ownership, the problem of human relationship and adjustment between managers and managed, and among workers, remains. And it remains as substantially the same problem. (The great majority of problems—selection, advancement, job analysis, pay adjustments—grow necessarily out of a machine era with its subdivision of labor and its separation of executive from manual worker.) For this reason we are hopeful that our principles, if valid, are valid for different industries, different localities, even different industrial systems and for other than industrial organizations.

We have been at pains to use as illustrations procedure which has proved successful in one or more plants in recent years. But we are under no illusion that practices useful in one situation are necessarily useful in another. The reader should constantly bear in mind, for example, that methods which apply in a large plant are not necessarily the best in a small plant; that city factory conditions are different from country factory conditions; that the situation where unskilled, foreign-born workers predominate is in certain respects unlike that where native born workers are in the majority. Each organization's problems must be analysed separately, and conclusions must be reached on the basis of sound thinking about principles and critical study of all suggested methods.

There are no panaceas or cure-alls in this field. The size of this book and the variety of the topics treated will give evidence of this convincingly, if any proof is needed. There is a bewildering variety of methods, practices and activities which must all be simultaneously carried forward if personnel administration is to be effective. This does not mean, however, that they should all be *started* at once. They should be developed as the need for them is felt and as they justify their existence. "Prove all things and hold fast to that which is good."

There has been in some organizations an unfortunate tendency to overdevelop some one activity which was of special interest to some executive. But the time is past when hobbies or pet ideas should be allowed to develop at the expense of a rounded human relations policy. The surest index of a personnel executive's grasp of his problem is his ability to keep a sane proportion in the unfolding of his different administrative tasks.

For all these reasons our discussion of successful practices has taken the form of illustrations of our conclusions rather than of numerous examples which might be uncritically copied. This book aims to be a helpful manual; but we cannot repeat too emphatically that every individual application of a principle has to be made in its own way in the light of the local circumstances. Hence we urge that the book be read quite as much to absorb a certain helpful point of view toward human relations as to discover specific next steps.

To the extent that the reader grasps and applies the liberal, scientific and human points of view which animate this volume, he will find that more ways and means will suggest themselves for use under his own conditions than we could enumerate in a much larger volume. "Tell a man how to do a thing, and he will not know how to do it;" said a very wise educator, "show him how by doing it before his eyes, and he still will not know how to do it. The only way for him really to learn is by doing it himself."

Five years from now a more scientifically accurate and informing text could undoubtedly be written on this subject than is now possible. Presumably more standards of procedure will have become clear. But the need for a volume to state the problem, define its limits and suggest the current developments, is immediately urgent. Already more firms see the need for specialized executive direction in personnel work than can find executives competent to assume it. Our volume is therefore offered at this time with a full consciousness of its limitations, but with the hope that it may help to establish the executive direction of human relations on a professional plane where a high ethical obligation of service shall be the controlling motive, and humanly scientific standards become the criterion of wise practice.

Since a selection of the topics to be treated was necessary in any case, we have chosen those which seemed to us vital, and have brought them into an arrangement and grouping which have a certain logic from the administrator's point of view; although we recognize that any functional grouping is arbitrary at best.

Needless to say, in a volume of this character the element of originality cannot be great; and we have tried to acknowledge throughout the text the sources of specific suggestions. But inevitably since our indebtedness extends in many directions,

all personal acknowledgements have not been made. And we can best express our very real gratitude to our unmentioned helpers by insisting that we regard this book as theirs as well as ours.

We recognize especially, however, the helpful services of our colleagues in the Bureau of Industrial Research at every stage of the volume's preparation, the beneficial criticism of managers for whom we have acted as consultants, and the cumulative suggestions of successive classes with whom we have studied this subject from every angle.

To Robert G. Valentine, to whose memory we dedicate the book, we owe a peculiar debt of inspiration and suggestion. Although Mr. Valentine died in 1916 before any of this material was in its present form, he exercised a determining influence in the direction taken by the text in the methods proposed no less than in the underlying point of view.

THE AUTHORS.

March 1, 1920.

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PERSONNEL ADMINISTRATION

ITS PRINCIPLES AND PRACTICE

CHAPTER I

THE FIELD OF PERSONNEL ADMINISTRATION

In the last ten years one branch of the science of administration has grown to new and significant proportions.

The logical necessity of centering attention in industry upon the effectiveness with which human labor is applied, has been the basic cause of a shift of managerial emphasis which has really only begun. Industrial management is thus far little beyond the threshold of a new method and a new evaluation of administrative ability. The new focus in administration is to be the human element. The new center of attention and solicitude is the individual person, the worker. And this change comes about fundamentally for no sentimental reasons, but because the enlistment of human cooperation, of the interest and goodwill of the workers, has become the crux of the production problem.

The human approach to effective production administration is through a specialized administrative agency—through the operation of a separate staff department in management. Present development is in the direction of a new science and a newly appreciated art—the science and art of personnel administration. To define and study this science is a necessary project if industrial administration is to be sound. To have insight into this art and skill in its use is imperative if satisfactory industrial relations are to be maintained.

Clearly, therefore, it is not a more penetrating conception of management which has to be justified or to prove its case; it is rather managers themselves who are today realizing how large a share they must shoulder for the responsibility which

is upon us all for the confusion and conflict into which industry has fallen. Their share is large because they have been in a position of leadership and control; they have often profited largely by their own success; and they have been slow to see the thorough-going muddle and atmosphere of hostility into which industrial relations have been plunged. And now, as indispensable functionaries, industrial executives must begin to make amends for their omissions.

It would be untrue to proclaim salvation for our industrial community through good management. The problem is not so simple. But the conspicuous part which wise administration must play—especially the administration of those affairs directly touching workers—in the upbuilding of a more stable and equitable industrial order, has been long enough ignored. It is distinctly the task of those charged with the function of management to possess themselves of a point of view and methods which give promise of better results.

What, then, is the nature, field and work of this new branch of administration?

A formal definition is easily phrased, but to give full force to its implications will require explanation.

Personnel administration is the direction and coordination of the human relations of any organization with a view to getting the maximum necessary production with a minimum of effort and friction, and with proper regard for the genuine well-being of the workers.

“Personnel administration” is used throughout this book synonymously with “employment administration,” “personnel management,” “administration of human relations,” and “administration of industrial relations.” And we shall, in referring to the staff department which performs this function, use all of these names interchangeably. In referring to the administrative divisions of this department which undertake specific work such as employment, training, research, service, etc., we shall speak of them as “divisions,” “bureaus” or “sections.” If we have occasion to use the term “employment manager,” it will be to designate the head of the employment division; similarly the term “service” or “welfare manager” will mean the head of the service division.

Personnel Work as a Managerial Function.—We desire to make clear at once that *the administration of personnel affairs*

is a major staff function. The personnel executive should be on a parity with the production executive; and both should in turn be members of the executive or operating committee of the company. Because production means the application of human energy to materials, a competent administrative organization must contain executives who are deft and felicitous in maintaining cordial human relations, as well as experts in plant and process.

There is no hard and fast line of demarcation between the administration of production and the administration of personnel; both are aspects of the management of the manufacturing enterprise—two halves of one administrative whole. But the personnel branch will see to it that at every point practical effect is given to the idea that the individual worker must be treated as a human being—an organic unity, whose native demands for work, income, home, family, play, intellectual, æsthetic and religious expression must be reasonably satisfied.

This view is, of course, at odds with the conception of the "employment manager" who has no policy-determining power, no major executive influence and authority; who is in reality little more than a hiring agent. It is equally at variance with the idea of a "service worker" or "welfare worker" who is in charge of such matters as factory health, rest rooms, home visiting, social activities and the like. Both of these agents might in a well-built organization be present, but they would be subordinate executives on the staff of the personnel administrator.

Too much importance cannot be attached to this initial declaration that the administration of human relations is a major, executive function. The professional standing and the effective progress of any factory's personnel work is in peril, as long as it is undertaken as a line rather than as a staff, administrative function. We hold here to the conception of the administering of the human relations as staff and administrative work, not because this is today the universally accepted idea, but because it is only when such a rounded conception of the administrative organization gains acceptance that any sound program of personnel work will be permanently assured.

It may be objected, however, that in almost all plants one or another of the major executives is already in control of the determination of labor policies. It is indeed true that even where no separate personnel function is explicitly recognized, the per-

sonnel policies are ultimately decided by a staff official—usually the general manager or president. But it is the lesson of all recent developments in industrial organization, that employment administration is inherently a separate major function for which special ability, peculiar aptitude and expert training are imperative if the best results are to be obtained both in deciding upon and in executing policies in the field of human relations. Administration of the distinctly human matters like selection, training, negotiation, decision upon terms of employment, etc., is already being widely recognized as a separate branch of human knowledge. We are not necessarily arguing against having existing major executives assume direction over the expert administration of this function. We are only emphasizing the fact that since many high executives are ultimately in charge of the personal and economic relationships, they should fully realize what vital duties they have in this field, what an enlightened point of view is required and what an elaborate technique should be applied, if they are to fulfil their responsibility for performing the work creditably.

If, then, personnel work is managerial in character and scope, the test of its success is the same as that for all managerial work,—its demonstrated or demonstrable ability to result in a more effective application of labor to production. In other words, this executive department is fundamentally as concerned as any other in forwarding the ends of production. The only difference is—and it is a difference of great importance—that its point of view as to how the ends of production can best be furthered, will be a special one. The personnel manager approaches the direction of production from the point of view of engaging the workers' interest in their work. He comes at it as an expert in the vitalizing of human activity and human association. For this very reason he may at times be unable to subscribe to proposed policies of immediate expediency which are dictated by motives of selfishness or profit-aggrandizement. His motive as a professional expert is not primarily that of profit. His objective is rather the following of his professional standards of expert service and the offering of advice as scientifically and humanly sound as possible. His presence in the executive organization is calculated to assure that at least one voice in its councils is speaking with full competency on the human aspect of production problems. His presence should assure that before

executive action is taken full and adequate weight has been given to psychological and human considerations.

Nothing is clearer than that in so far as the personnel executive comes to regard himself as a professional person, he will find himself at times in sharp disagreement with the policy or methods favored by other executives. That will be in no way to his discredit; indeed this is in a sense the service he is there to render. And to the extent that his stand is dictated by a high sense of ethical obligation combined with a full and accurate scientific knowledge, he will be fulfilling his essential function. He should, in fact, be to a degree the conscience of the management; not, as someone has said "the conscience of the factory."

One reason for stressing the managerial significance of this work is thus to establish at the outset the point that expenditures and activities undertaken in the field of personnel administration have in large part to be justified in the same way as all other managerial expenses and activities. The question which managers should always put is: Does any proposed activity in the field of personal or economic relations further in reasonably direct ways the ends of truly efficient production? There is, we admit, no arbitrary line which it is possible to draw between "company activities" and "community activities," between personnel procedure and "welfare" proposals. But the closer the corporation confines its activities and expenses to those which are justified in the eyes of management and men alike as practices essentially contributing to production, the more wholesome and sound will its personnel policy be.

Direction of People.—Again, as our definition points out, employment administration is concerned with the direction of *people*, and those activities primarily affecting the workers. This fact puts upon this branch of the management a special duty of knowing all there is to know about people, about their physical and mental constitution, about human nature. This knowledge, in so far as it is available, is organized in the sciences of physiology and psychology. The administrator must be familiar with essential principles in both fields. But since the science of psychology is the less familiar and opens up a point of view toward personnel problems which it will be useful to retain throughout our study, we shall present the outlines of a psychological approach in the next chapter. The value of such an approach is nowhere better suggested than in a sentence of Glad-

stone's which says that "man is the crowning wonder of creation and the study of his nature the noblest study the world affords."

The Criterion of Productivity.—Our definition also calls for "maximum necessary production," as a part of the employment administrator's purpose. At the present hour in the world's history, it requires no argument to prove the importance to all of high productivity. The world is probably poorer today in the relative amount of useful goods in hand than it has been for some decades. The comfort of the entire community is dependent upon the abundant production of all. The case for high productivity in the next quarter century of reconstruction is thus impregnable.

But it is a criterion to be applied with caution. Our machine system would be exceedingly productive even with the present equipment if it were run to capacity with true efficiency within each producing unit or plant. Production should not, and of course usually does not, proceed without some relation to a known demand. But the criterion of human need is applied less frequently by business men than that of saleability and profitability. There is, for example, nothing to prevent the manufacture of pleasure automobiles for which there is a demand while the need in human and social terms may be for blankets or shoes or houses. There is, again, nothing to prevent an ambitious manufacturer from trying to control ten per cent. as against a former five per cent. of the competitive market, only to find that his added five per cent. production does not get a ready sale. In short, the word "necessary," is indispensable in our definition. It may not, to be sure, be the immediate function of the personnel administrator to determine the amount of needed production. But such determination is a task to which he should intimately be a party. Until the management of every single factory knows how much of the total product of its industry it should plan to make and dispose of each year, there is no assurance of regularity of work, or maximum utilization of equipment.

The workers have, moreover, a legitimate fear of unregulated productivity and of a blind passion for output without regard for known needs. Until some organization which can get the facts about demand is created, it will naturally be difficult to secure their fullest interest in work. Just as it would be hard for the hot-house worker (even though he were well paid for his

labors) to be interested in the cultivation of his produce if he knew that because of defective marketing arrangements, it was all to be allowed to wither on a railroad siding; so with the industrial worker, a sense of the utility and need for the results of his labors, is an increasingly necessary condition of good workmanship.

Reducing Effort and Friction.—"With a minimum of effort and friction" implies conscious study of the methods of applying human energy to the machinery and materials, and of the methods which create good will, understanding and mutual confidence. The employment administrator has in conjunction with the technical production administrator the job of seeing that the energy of workers is applied with greatest effect and economy. Their method of assuring this will be by the constant use of the type of job analysis which we shall later discuss.

Manifestly, one of the immediate duties of the executive in this field is to reduce personal and group maladjustments, grievances and frictions. He must help create formal machinery to treat with these difficulties; he must help to invest the whole plant with an atmosphere in which animosity cannot thrive; he will assure that the terms and conditions of employment are such as to occasion a minimum of dissatisfaction. "If there is harmony in the factory," says the clever motto of a piano factory, "there will be harmony in the piano."

The Well-being of the Personnel.—"With proper regard for the genuine well-being of the workers" is the clause of our definition, which perhaps more than any other, distinguishes this branch of management. It is to this end that the personnel executive should know the nature of people and the real content of human well-being. He is, so far as this is possible, the scientist in human nature and human relationships. Upon his answer to the question: What constitutes well-being? depends his judgment about practical procedure.

Personnel Administration a Permanent Problem.—Our definition assumes that we are confining ourselves to the administrative problems of industry. This is true only so far as concerns the specific illustrations cited in this volume. It is important to bear in mind two facts in this connection. First, the principles of personnel administration as herein set forth will be found to apply to a considerable extent wherever there is a relationship of employer and employed, of manager and managed.

We earnestly commend these principles, not alone to the consideration of the managements of factories, stores, mines, transportation companies and the like; but to the directors of hospitals¹ and institutions, to school boards, and especially to civil service commissions in cities, counties, states and the nation. Inasmuch as the combined employees of governmental bodies form the largest body of employees in our country, the application of modern employment methods to problems of joint relations in the civil service would be one of the great forward steps in the utilizing of modern administrative science.

And, in the second place, since the principles of personnel administration largely apply wherever there is a relation of manager and managed, it is important to understand that the problem exists, at least in many of its aspects, *independently of the problem of ownership in industry*. Wherever title to the ownership of industry may reside, the majority of the problems of directing the personnel remain the same.

We urge the point because in some quarters there is a disposition to believe that a change in the title of ownership—for example, to the government—could of itself “solve the labor problem.” In our view this is fallacious, *since a major part of the labor problem is from the point of view of the science of management, to establish a satisfactory and effective working entente between managers and men*. The relationship of director to directed creates problems in human contact, association and organization, which are inherent, permanent and virtually universal.

There are, we recognize, other points of view toward the employment problem, which would demand that the effects of the present basis of ownership and control of the means of production be more fully reckoned with as a complicating factor in industrial government. And it is undeniably true that certain managerial problems cannot be completely solved in dissociation from problems of ownership. The arousing of interest in work, for example, may be found upon analysis to require conditions which are permanently unobtainable unless the workers have more to say than at present about the disposal of the product and of the income from production. But with certain important exceptions, problems of managerial technique may be considered separately from problems of ownership.

¹ See VALENTINE, R. G. Application of Principles of Organization to Hospital Service. (In *Modern Hospital*, v. 6, p. 262-7, Apr., 1916.)

Even in the extreme case where the administrator is selected by those whose work he directs, the problem of supplying a working managerial technique remains essentially unchanged.

Motives in Personnel Policies.—We may usefully define the future outlook for personnel administration if we next indicate the familiar types of controlling motive which animate corporations in the field of personnel policy. There is, first, the corporation which still adopts a belligerent, repressive and domineering attitude toward its employees. In such companies the amount of standard employment procedure of the sort outlined in this book is at a minimum. From every point of view we believe that this neglect will prove more and more unwise; all the evidence at our disposal indicates that such a do-nothing policy is shortsighted and unbusinesslike today.

There is, second, the corporation which shrewdly evaluates all its personnel work in terms of the cash return. If it can see a saving or an additional profit in any procedure, it will adopt it unhesitatingly. Much, if not all, of the procedure of personnel work has been found by some of the companies of this group to be a "good paying proposition." Indeed, we can unhesitatingly say that there is hardly a proposal which our volume advances, which some one or more companies have not found to "pay" in the strict profit sense of the word, soon enough to assure that the procedure was not abandoned.

But there is still a third type of corporation, of which there are significant examples in every large section of our country, where, although they are necessarily concerned to secure a profit as a measure of their utility and assurance of their future development, major attention is being paid to perfecting the organization as an instrument of production and public service. Companies of this sort have succeeded in remaining free from the control of overweening financial interests; and, recognizing that management is an expert, professional function quite separable from the function of "promoting" or of investing, they are seeking to perfect the administrative technique. Obviously in such cases the professional spirit has freest play and the application of science and art to organization can be made most rapidly—since every experiment has not, even before it is made, to demonstrate its complete practical utility and profitableness.

It is in companies of this type that the most significant advances in the personnel field have been made and virtually all

the experimental work has first been done. Not a few of the suggestions which this book will offer have been drawn from the efforts of these pioneer concerns. We feel free to draw upon their experience because practically all of their new efforts have slowly but surely been borrowed and adapted by other less adventurous firms. And after all, what is needed is not alone a rehearsal of successful past experience in this field, but also a clear indication of the tendencies of development in the next quarter century.

A Professional Standard.—Perhaps the most substantial value in the pioneering work of these companies is the impetus it has given to establishing personnel administration on a professional basis. Indeed, it is upon the extension of this professional spirit throughout the entire field of management that the future security, integrity and effectiveness of personnel administration depend. For a professional attitude which is common throughout management means a readier understanding and a common ground for cooperation among all executives. The essence of the professional spirit, we take it, is its solicitude for the maintaining of its professional standards in the face of all odds. And the corner-stone upon which all professional standards rest is a motive of disinterested service for the common good; an attitude in which attention is fastened not upon the reward but upon the thoroughness of the workmanship and the utility of the work done.

Our definition of personnel management and the subsequent discussion of its principles and methods should furnish a reasonably clear statement of the standards which are here at stake. This profession is concerned to secure the maximum necessary production with a minimum of effort and friction, and with proper regard for the health and happiness of the great body of workers. If the reader will examine, as the rest of this book attempts candidly to examine, the implications in theory and practice of such a professional claim, any conclusions which we have reached can be left to take care of themselves. The thoughtful student will inevitably come to conclusions of his own which in the light of his experience may or may not square with ours. They will, however, be arrived at in a professional spirit; and thus he will come independently, as each one should, to an adequate grasp of the science and art of administering human relations. He will find himself demanding a wholesome adjustment between

the purposes of productivity, profit,¹ and the well-being of the personnel.

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¹ Profit, not in the sense of excessive earnings for private investors, but rather in the sense of an earning power sufficient to meet all costs including a fair rental charge for any capital which it is necessary to borrow plus amounts for the replacement of worn out equipment, and amounts for the legitimate extension of the enterprise.

CHAPTER II

HUMAN VALUES IN INDUSTRY

We have already defined personnel administration as the work of directing human relations with an eye to productivity, goodwill and positive regard for the quality of the life of all the workers—regard for human well-being. Profits and a stable working force may to a considerable extent offer a measure of the success of efforts toward productivity and goodwill. But human well-being needs some more explicit definition and measure. If managers in the field of industrial relations are to work with maximum effect they must have as definite an idea as possible of the elements in human well-being,—of those qualities in individuals which are native, fundamental, socially useful and worthy of fuller release and development than they now enjoy.

In a word, it is a peculiarly important duty of all who direct people to know all they can about human nature and about a standard of human values in life which such knowledge suggests.

At present in the absence of this knowledge—or in the absence of its close application to economic problems—industry pursues its own way with standards of value and with purposes which, essential as they may be, do not see the whole purpose of industry; and do not, we believe, square with all that is now known about the impulses which move the great majority of people to act as they do.

There is, however, good reason to believe that if modern managers will take time really to understand the true character of human beings and of their animating motives and most deep-seated tendencies, they will find profound suggestion as to the meaning of human well-being and as to the purpose which industry must hold as central for its most successful operation.

Human Characteristics Unchanging.—It is first useful to reiterate that the old saw, “you can’t change human nature,” is true; and that in its truth lies a real basis of hope. For it means that all of us, regardless of clothes, vocabulary, social

standing, language and color, need and desire the same fundamental things in life. We may fairly gauge the demands which others will make upon life by the demands which we make—not necessarily in the details but in the essence. Home, family, prestige, security,—these are as significant and influential in controlling the life of the humblest night watchman as in controlling the life of the president of the corporation.

Moreover, the sameness of human nature means that the same appeals and the same kinds of methods, elicit the same kind of response. Without that assurance of similar characteristics and similar mental habits, education would be impossible; all types of association would be capricious; every individual would be a law unto himself.

Because people are in essentials moved by the same desires and satisfied with the same activities, there can be reasonably confident assurance that ideas, purposes and aspirations which do find a basic appeal, will also find a universally wide appeal, if only, as we say, human nature has a chance. For the permanence of the characteristics in the human equipment does not argue against improvement in individual or social life. It argues rather for a clear understanding of those characteristics which seem to possess the most constructive force; and for a conscious effort to nurture them. For there are apparently some tendencies in the human being which are today more useful than others. We need, notably, as a recent writer has suggested, a nurturing of the *creative* tendencies of people at the expense of the possessive tendencies. Just what this means in terms of specific endowments will appear only as we enumerate some of the primary human traits.

Bodily Integrity.—No study of human characteristics can proceed far unless it is grounded in a knowledge of the influence of bodily conditions upon life and attitude. Behavior, says the biologist, is a function of structure. And it is no less a function of the health of the organism. Much confusion about variations in the responses of people to similar situations is due to a failure to take account of differences of physical condition. Low vitality, under-nourishment, continued over-eating and under-exercising, bad liver and bad lungs—all modify the character of the individual's behavior. And until managers are prepared to face the problem of their workers' attitude first in terms of bodily integrity, they will meet only confusion and inconsistency in

trying to foster qualities in employees which are dependent for their normal existence and growth upon good health.

"The basis of all national progress, whether industrial or social, is the health and physical efficiency of the people." And the need and desire for individual health and free-flowing vitality is native to us all. The soundness of any procedure or of any purpose in industry or in life depends upon its ability to square itself first with the innate demand for physical wholeness.

Love of Family.—Coupled directly with the reality usually referred to as a tendency toward self-preservation, is an equally strong impulse to race preservation, which expresses itself in love of parents, wife and children. Until managers realize that not only is this love just as strong and fine and socially beneficent in working class families as it is in their own, but that it also impels workers in the same way, they will be blind to a simple truth which has significant consequences in industry.¹ For the passionate desire to see families not merely supported but "getting on," to see children have larger opportunities than parents had, helps to explain much effort and sacrifice.

Indeed, a combination of these two tendencies—toward self and race preservation—explains why the demand for a living wage, for a progressively higher standard of living and especially for security of livelihood, is so insistent. It may be truthfully said, we believe, that the failure of managers to satisfy this demand for security of livelihood is at the bottom of the bitterest protests of the workers against current industrial practices. The objection may, of course, be urged that if this security existed there would be little stimulus to effort—that there would be universal slacking.

The Creative Impulse.—The best possible answer to this contention is that in modern industrial life another native tendency has been all but forgotten. That tendency has been variously spoken of as the "creative impulse," "the instinct of workmanship," the tendency toward contrivance. The fact behind these names is of tremendous importance. People, especially in the temperate climates, prefer activity to idleness; they prefer activity to which use is imputed or in the accomplishment of which honor and approbation are to be gained. They prefer activity

¹ For a fuller treatment than is here possible of the influence in industrial life of the native human characteristics see TEAD, ORDWAY, *Instincts in Industry*.

where some tangible monument of achievement remains. People universally have a passionate desire to be recognized by those around them as counting for something. And they know that they count for something only as they act. The action may take queer, perverted forms because no direct channels seem to offer; but fundamentally the action which counts in terms of self-satisfaction and of group approval is action which is in some way creative.

This desire to be creative is fundamental in human nature. And for this reason failure to find a channel for its expression may result in serious difficulties. For the suppression of basic natural tendencies is known to be potentially disastrous. There may, where repression has been long and intense, be varied manifestations of suppressed desire. The creative desire may finally work itself out in destructive ways, or in trivial, useless ways, or in channels and "movements" that appear not to be in line with the individual's natural interests. But that it will work out in some way, we know; and the task of individuals and groups is to find it some positive outlet.

The likelihood of repression and the fact of its possible bad effects, points again to the importance of considering which human tendencies should be most encouraged. For the sex instinct and the desire to accumulate and to glory in possession are also native; and it is essential to wise social and industrial policy to discover the degree to which the energy which these impulses represent can be transferred, rather than simply smothered and turned in upon itself. Each of these tendencies contributes to the integrity of human nature; but unless sex preoccupations can be diverted into channels where love of wife and children holds the center of the stage, there is likely to be danger ahead. And unless the pride of possession and of accumulation, which may start with postage stamps when the boy is twelve and end in the ownership of old masters or heavy stock holdings, is kept in proper bounds, the pursuit of selfish ends may become socially intolerable.

On the other hand, failure to provide proper channels for these two tendencies is equally dangerous. Itinerant workers who are permanently "jobless, womanless and voteless," may be a genuine menace to the stability of the community. Workers who have never been able to get sufficiently ahead to own more property than can be packed into a rucksack have not the same

sense of responsibility and participation in the permanent life of the community that the man who owns a house and furniture has.

The problem of balancing these several tendencies must depend in the last analysis upon some agreement as to the purpose which industry—and indeed life itself—is to serve.

The Desire to Possess.—There is undoubtedly in the human characteristic of possessiveness a stabilizing influence of considerable social value. If people can establish an area of proprietorship and control—even though it be only over a backyard thirty feet square—a real satisfaction is secured. Things that are undeniably “our own” are a pleasure to us. It is probable that normally the sense of ownership is most stimulated where the things possessed are in actual use by the owner and are the product of his own labors or the expression of his personal choice.

To be sure, this natural tendency under modern conditions can take perverted and unwholesome turns. But the important fact for industrial experts to bear in mind is that apparently possessiveness is a good quality if it is kept in balance by other factors like love of family, creativeness and desire for approval. And until manual workers can get some reasonable degree of satisfaction for this tendency, they are being deprived of benefits and enjoyments to which they are entitled. The unfortunate truth seems to be, moreover, that all groups in the community have today so translated all values into cash terms that material possession—or the symbols of it—is an unduly conspicuous factor in securing social approval.

The Value of Curiosity.—A further desire of human beings is to know. Curiosity is native; and the word “why” comes naturally to the lips of those who have not too often been discouraged by receiving no intelligible answer to their questions. Generally speaking, people do what they have to do better when they know why they do it. There is a fundamental connection in the human mind between conduct and knowledge, as well as between conduct and impulse. It is true that conduct is largely impulsive; but the hope of getting any direction into it, of securing some sensible selection by the individual of socially useful activities, is in getting him to “know better.” To know better is to have in one’s mind an accumulation of past experience of one’s self and of others in similar situations, and knowledge also of how the experiences “came out.” Intelligent conduct, in short,

is conduct in which a course of action is pursued similar to that course found by previous selection from among similar alternatives to bring a better adjustment of the individual to his surroundings.

Indeed, the hope of improving the quality of people's choices in the ordinary problems of life lies in cultivating this natural desire to know. This increasing knowledge, this making available to the individual in organized form the best experience of the past, is the essence of education. And managers who ignore the place that education and an educational motive should play in industry are losing the value of a nurture which is in reality the indispensable condition of any progress.

The Desire for Association.—A further active desire of people is to associate with their kind, particularly with people whose outlook and purposes are similar to theirs. Modern industry requires an unprecedented amount of association and cooperation; but much of it is enforced. People cooperate in factories not because they want to, but because they must on pain of foregoing a livelihood. The problem of rendering this association a voluntary and willing one is urgent because it is in association which is reasonably self-initiated and spontaneous that the most effective work is done and the most pleasurable atmosphere prevails.

Shop committees and labor organizations, whatever their other values or dangers, are unquestionably an asset in satisfying this elemental yearning for comradeship. And there are evidences today that whenever the desire to create and the desire to associate can be coupled with people's naturally eager search for the approval of their fellows, there is a strong and irresistible concentration of human sentiment which is effective in swinging any program to which the people involved may set their hand.

It is because the desire to associate is so innate that the demand for the approval of those with whom we associate is also dominant. Indeed, if properly used this desire to be thought well of by our fellows is an immensely constructive force. Much that we speak of as the conventions of society is nothing more than crystallized attempts to organize the approval of men in behalf of those ways of acting which past generations believed to be safe or wise. And the problem that confronts us at every turn in industrial life is how to organize the approval of fellow workers of head and hand, and the approval of consumers, so as to offer

a legitimate and important stimulus to useful effort. For it becomes increasingly clear that it is not money or the pay envelope that stands at the center of the thinking of owners, managers and workers; it is the honor and standing which comes with the monetary return.

The Desire for Approval.—More passionately than almost anything else people desire to be thought well of by those whose opinion they value. It seems indeed as if this yearning for approval was only a diluted form of some tendency even more basic—a tendency to give and receive generous, disinterested affection and regard between man and man. But even this tendency has its definite basis, and it can only be fostered if its sources are properly understood. Goodwill and actual warmth of intercourse between individuals and between groups depends upon three things; upon personal acquaintance, a full knowledge of people's motives and achievements, and upon a definite attempt to organize the approval of people around the sentiment of friendship and the attitude of mutual trustfulness. And if it is true that people fundamentally desire not only approval but affection, there is a suggestion here as to the value of widening and deepening the quality of personal relationship in industry, which has thus far been untapped and unsuspected.

The Desire for Justice.—Related to the desire for knowledge and for approval is a deep desire for justice. Contradictory as may be the forms which this demand takes from decade to decade, men are still eagerly searching and are still never satisfied until relationships, institutions and opinions seem to them "just." The appeal of the "square deal" has not been in any definition or specific application which it ever received, but in the universal demand of people that in so far as they have knowledge about a situation, "fairness" shall prevail.

As applied to the industrial problem, this idea of fair play is, of course, especially baffling, but there do seem to be emerging several ideas which lend it definiteness. That there should be some approximate relation between expenditure of effort and reward is now thought to be "fair." That passive ownership is sufficient justification for the receipt of income is, conversely, being increasingly thought to be "unfair." That full authority over shop affairs and terms of employment should be vested in the management alone, is also being questioned by many as "unfair." That the continuance and extension of the basic,

essential industries should depend upon the willingness of private investors to lend money, is another condition which some groups in the community believe "unfair."

Love of Beauty.—There is a similarly indefinable characteristic of people in their desire for esthetic satisfaction. Groupings of line, color, form and sound which are felt to be "beautiful" are profoundly satisfying and a source of great refreshment. Yet beyond this general statement it is difficult to go because esthetic standards are so divergent.

A knowledge of "the best that has been thought and said in the world," is within limits a source of individual enjoyment; and we find mind meeting mind and spirit rising to greet spirit back over the centuries in a way that indicates a common yearning after the fine things of the intellect and the spirit. So that varied as esthetic standards may be, we do find a desire for beauty as native and permanent as a desire for "justice" and "truth."

Love of Goodness.—Yearning for "goodness" or "righteousness," vague and sporadic as it may often be—covered over by more immediate claims, set at naught by the paralyzing effects of some fear—is still a historic fact in human experience; and historically also it has usually been identified with some "religious" sanction. This desire has thus far been expressed largely in terms of individual conduct. And there has until recently been little attempt to reconcile ethical demands upon groups with those made upon individuals. But as the sense of ethical obligation for right conduct spreads to include group behavior, managers will witness a release of power, energy and goodwill, which is today unthought of. And they must definitely reckon with the increasing part which the passion for righteousness and the demand for righteousness reenforced by religious sanction, will play in the thought of workers and consumers, as well as among themselves. For the concrete expression which such a sentiment finds is in human cooperation, fellowship and fraternity, in public service and efforts for the common good.

The Unifying Factor.—Human nature is the manifestation of the interaction of these and other elements and characteristics. Human desire covers a range extending from essential physical needs, to more generalized demands of impulse, to intellectual, moral and spiritual desires. All have to be reckoned with; all have a place.]

But the human personality, manifold as are the forms of its

expression, is not simply a battleground for conflicting impulses. Unifying tendencies are at work; organization of the individual's impulsive life is not merely necessary, it is as native to human beings as thought itself. And there are indications that society will realize the promise of personality only as it understands how potentially fine and generous are people's strongest and most elementary tendencies. The human tendencies which are seeking wider and wider expression and which bring harmony, release and happiness are the positive characteristics of love of family, of association, of creation, of group approval. Personality is thus translatable into terms of individual quality, into terms of fullness of life, forbearance, generosity, creative power, comradeship and love.

In a word, upon examination personality is found to contain within itself its own penetrating suggestion as to human purposes. Personality thus becomes an end in itself; the integrity of the individual life and the maximum improvement in its quality are permanently valid objectives. For out of human nature spring all the positive energies which in their expression satisfy the individual and contribute to social upbuilding. The fulfillment of personality is the liberation in the individual of those native qualities which make him free, active and energetic, and which because of this freedom make him also willing and happy in those activities which have social utility. Personality is essentially a social product. It is the best possible life of the individual manifesting itself as a contributing force in the common life of the community. Self advancement and social advancement are, in short, but two aspects of one fact—the fact of individual realization.

It is, we conclude, a sufficient and lofty purpose in life to strive for the development of as many individuals as possible into fine, free, generous, serene and happy human beings. No one has ever excelled the compactness and directness of Aristotle's definition of the ultimate in life when he characterizes happiness as "an activity of the soul in the direction of excellence in an unhampered life."

This ultimate aim cannot be too explicit. The individual in this view "is the home and center of all values." And "the end of all moral effort is the production of a worthy type of personality, an inner life, rich and noble in content."¹

¹ EVERETT, WALTER G. *Moral Values*, pp. 227; 247.

Personality in Industry.—Reinstatement of the human personality as the central value in life has a significance for industry which it is impossible to ignore. It implies that as a condition for the development of the individual, there must exist a reasonable freedom for choice of work, for leisure, for growth, for free association, for exercise of the whole gamut of human faculties.

Industrial practices are, in other words, to be judged in terms of their effect on human beings. If personality is central in life, then it is—or should be—central in industry. Surely, managers and workers are not carrying on their labors for the sake of “industry.” Industry is being carried on for the sake of people—the people in it and the people whose needs it serves. And the profession of management, especially in its personnel branch, has a major task of understanding this purpose, this natural and sensible emphasis upon the human values as central in the world’s economic life. The department of personnel is indeed, as someone has well characterized it, the department of personality.

In the light of present day labor problems and of contemporary knowledge about human characteristics, the need for a redefinition of standards of factory procedure and for a new statement of purposes in industry, is only too apparent. Happily it is now being increasingly acknowledged that human beings natively and fundamentally prefer doing good to doing ill, prefer creating to destroying, prefer approval to disapproval, prefer love to hate and happiness to misery. And industry, if it is to develop in the light of these human needs and desires, must come to that simple but essential truth—that human beings are of primary value in life.

The purpose of industry is to make needed goods—in sufficient quantity and at moderate cost. But more fundamentally the purpose of industry is to enhance human happiness. And until industrial managers set themselves to reconcile these two purposes there will be conflict and misunderstanding not only between managers and men but in the minds of managers themselves.

It is a matter for congratulation today that such a reconciliation gives promise of being realized. But it will be possible only when there is wide recognition that personality is a supreme value in life.

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CHAPTER III

THE REASONS FOR A PERSONNEL DEPARTMENT

As intimated in our first chapter, the fundamental reason for the development of a separate administrative division for the direction of the human relations is a growing recognition that people are endowed with characteristics different from those of machines or of raw materials. And if people are to be directed in ways which give best results, that direction must be specialized just as direction in the other major fields of management has been specialized.

The Division of Labor.—The case for specialized administration has, first, its historical setting. The development of power driven machinery has meant the division and sub-division of operations until the tending, feeding and “minding” of machines becomes a significant proportion of all the work required in a factory. It is dangerous to over-generalize on this point; but it is still too largely true that this division of labor has tended to remove interest and significance from the work done to an alarming degree. “It is possible for any man or woman to go into a factory and in a day or week become an acceptable operator and earn a desirable week’s pay. In fact, the entire tendency in industry has been to place a premium upon the uneducated worker.”¹

Under such conditions, where there is only conformity to the demands of a machine, particularly where workers remain at such narrowing processes against their will, the human costs have obviously been heavy.

“If the machine tender,” declares Hobson, “could become as automatic as the machine, if he could completely mechanize a little section of his faculties, it might go easier with him. But the main trend of life in the man fights against the mechanizing tendency of his work, and the struggle entails a heavy cost. For his machine imposes a repetition of the same muscular and nerv-

¹ LINK, H. C. Employment Psychology, p. 382.

ous action upon a being whose muscles and nervous system are continually changing."¹

The personnel director finds an important task awaiting him in this field. Study and experiment are needed to discover how certain factory work can be so further mechanized as completely to eliminate the need for monotonous "feeding" jobs, and to institute a variety of other compensatory activities to offset the results of highly repetitive work.

The Corporate Form of Management.—The corporate form of management which has extended rapidly in the last half century, has also tended to develop an impersonalism in the relationship of different groups of workers which has its dangers both to productive efficiency and to human happiness. An important reason why results in securing economies in large scale plants have never realized people's expectations is that this impersonalism has helped to create complete indifference about the results of their work in the minds of the manual workers and even of the lower executives. There has been an attitude that since they were working for a big and rich company economy was no object; that since they got relatively small pay they would give relatively slight return in quantity and quality of work. In addition to the disintegrating effect of this natural reaction must be considered the weakness of long range and absentee management; for there has not yet evolved a technique of combining centralized control with sufficient local autonomy to overcome the obvious limitations of management by fiat rather than by personal knowledge. And the result in a lax, careless and indifferent attitude among the rank and file is almost inevitable.

To counteract these aggregate effects of long range and large scale management a deliberate and a comprehensive program is necessary; a program based on a recovery of personal contacts and personal acquaintance between managers and men.

There is, of course, a limit which is quickly reached to the number of persons that one can know by name and know in a way that makes it possible to reckon with the individual's special qualities and limitations. Yet it is, in the last analysis, upon a sense of personal relationship and upon a knowledge and utilization of individual, special abilities that harmonious productive working relations in large part depend.

Already a degree of personal relationships between some one

¹ HOBSON, J. A. *Work and Wealth*, p. 61.

in the management and each worker has inevitably to exist; and it is usually a foreman or his assistant who stands as the personal link. But as soon as the need for expert selection, training and negotiation over terms of employment is seen, the necessity for personal knowledge and association on the part of other executives than foremen becomes apparent. And the staff which is brought in to carry on these activities of personal contact and adjustment is in fact—whatever its name may be—a personnel department.

In short, both in the shop and in the executive councils of large organizations the need for knowledge of the individual workers and for a sense of corporate unity can be met only as there is deliberate intention in these direction. And it is the experience of many corporations that this deliberate intention is never realized until there is in the management a department specially devoted to studying and applying expertly the methods of restoring a sense of personal association among all workers in the organization.

It is frequently argued that the existence of a high labor turnover is a reason for having a personnel department. That may indeed be the immediate occasion of its introduction. But since turnover among workers is itself only a symptom of other maladjustments, it will be more accurate to say that the need for scientific and personal adjustment of the individual worker to his job and to the organization is reflected in the high labor turnover which so frequently exists.

Development of Administrative Science.—The development of scientific knowledge and standard methods of procedure in the several branches of industrial administration has tended directly to show the need for a scientific approach to the personnel aspects of administration. And a growing conviction that scientific methods were applicable to problems of human relations has led naturally to a study of the science of psychology. For, as we have shown in the previous chapter, students of management have come in recent years to see that this science can yield substantial evidence as to the nature of people and the typical modes of their behavior.

On the one hand, therefore, a growing body of knowledge about people and their behavior, their motives, impulses, and desires, leads to a belief that managers can discover and apply methods which are relatively scientific and human in industrial relations.

And on the other hand, the growth of elaborate technique in the fields of sales, production control and accounting has pointed the way toward what might be done in the field of personnel. Accounting, for example, beginning with simple book-keeping origins, has elaborated a method of cost analysis which now becomes one of the means of showing managers their wastes and losses in the application of the working force to the equipment.¹ By knowing the amount of idle time at machines due to irregular work, poor training, improper handling of machinery and the like, the accountant has built up an unanswerable case for careful selection of workers, for their systematic training, for specialized machine maintenance and the like.

Again, the engineer who has organized a factory's flow of work by means of a new staff department to plan, schedule and route the work from process to process, can bring a strong case for more knowledge about the time it takes workers to perform a job. He points out from his special angle the need for competent foremanship to keep the flow of work up to schedule, for proper instruction to get uniform methods of handling and delivering work. And, if possessed of a little imagination, he may even argue that the working efficiency of the plant is affected adversely by ungenerous terms of employment and failure directly to seek the goodwill of employees.

In other words, not only is administrative science in industry daily becoming more highly functionalized; but each of the new specialties has its evidence as to the need for functionalizing on the human and personal side. For executives in every field are coming increasingly to see that the source of efficiency, economy and goodwill which is particularly elusive and at the same time peculiarly critical, is the attitude with which the individual's and group's energies are applied to the job. Mechanical perfection without the human consent of those who run the mechanism is no more effective than a scissors with only one blade. There is vital necessity for actively enlisting and inspiring the working force. The workers must cooperate. And the difference between their enforced consent and their enthusiastic cooperation may well be the measure of the value of a new administrative department specializing in human relations.

Recent Growth of Functional Management in Personnel Activities.—Moreover, there has in the last decade been a growing

¹ See GANTT, HENRY L. *Organizing for Work*. Ch. III.

recognition by managers that in one field or another, depending upon their special needs, personnel activities were essential and profitable. The movement for vocational guidance was closely related in its early days to the movement for careful selection of workers by special employment departments.

The movement for vocational training and for corporation school training was another distinct influence which developed independently and brought many large corporations to see the need for improved instructional methods.

The safety-first movement, again, had its own appeal and grew as a separate branch of management effort.

Collective bargaining and shop committee dealings were also developed in many plants under the pressure of the local situation rather than in response to any organized program of personnel procedure.

And it is only in recent years that any considerable number of managers have come to see that these several special growths are really all parts of one big staff function and should logically, therefore, all be grouped under it.

The war unquestionably hastened this integrating process in many plants and crystallized in the minds of many students of the science of management a conviction that this integration was a sound development. The need for strictest economy in the use of workers during the war caused all managers to be far more open minded and experimental about a self-consistent policy of personnel administration than they would otherwise have been. And in consequence personnel executives were secured and executives trained in personnel methods on a scale which had not formerly been contemplated even by the most enthusiastic exponents of the idea. It should be added, however, that by no means all of these new executives are personnel managers in the sense defined in our first chapter. Yet this is not surprising when one considers how relatively few executives were, or yet are, thoroughly competent to assume the position of personnel manager. We are faced admittedly with a comparatively new synthesis; for the idea that the special work of selecting, training, negotiating with and maintaining a working force, should be made the responsibility of one staff department, is comparatively new.

Conclusion.—The case for the personnel department rests, in summary, upon economic and upon psychological grounds.

The economic grounds have to do with the structure of modern industry and the modern corporation, with the nature of processes under present machine conditions, and with the need for specialized attention to problems like selection and training.

The psychological grounds have to do with the interest, enthusiasm and goodwill of the workers, with their demand for security of employment and fairness of treatment, with that subtle but growing conviction that they must have a new status in industry.

To say which of these two grounds offers the stronger case for reorganization in the administration of human relations is impossible. But it is manifestly true that in a majority of corporations production is today affected adversely not so much because of technical inadequacies as because of the failure of managers to recognize that workers are human beings who demand the considerate treatment which only intelligence and insight regarding human nature can suggest.

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CHAPTER IV

FUNCTIONS OF THE PERSONNEL DEPARTMENT

All discussion of the proper functions of a personnel department should distinguish between a theoretically sound division of duties and the redistribution of executive responsibility which it is immediately practical and expedient to make.

There is, at least in the more advanced and large scale corporations, fairly close agreement as to the functions which should be assigned to the several divisions of this department. And it will be our endeavor to outline those functions in this chapter, leaving to subsequent chapters a description of the methods of carrying out their attendant responsibilities.

This exposition carries with it, however, no suggestion that every corporation should necessarily at once organize or reorganize its executive work in complete conformity to this scheme. It is rather the model to which all may profitably be brought to conform as rapidly as local conditions permit. For there is little to be gained by the adoption of a paper plan which is not actually accepted and worked on by the entire organization. The allocation of responsibilities to personnel executives should therefore take place only when the personnel department is reasonably sure it can handle a function at least as well as it has been handled under some other jurisdiction; and when the other executives who have a direct interest in the successful performance of the function are sufficiently cordial about its transfer to be willing to cooperate with the personnel department to the best of their ability. There will, of course, always be doubters and scoffers whose objections should not be given too serious weight; but it is nevertheless tremendously important for the personnel department to develop and extend its authority no faster than it can competently do the work it undertakes.

It will help to keep managerial thinking on this problem sound, also, if at every point the distinction is kept in mind between functions and people. There may be but one employment executive in a small plant, yet he may have responsibility for various

functions. Or there may be one executive whose qualifications are such that he is, for example, successfully used as a selector, as editor of a company paper and as job instructor. Such a combination of duties is by no means an evidence of poor executive planning. Indeed, it will usually be good policy to let the qualifications and interests of the staff determine the actual distribution of their duties, rather than to hold to an arbitrary and complete departmentalizing of the work that each does. But where this policy is pursued it is useful to keep currently accurate two charts: One showing the several functions which it has been agreed the personnel department shall assume; the other showing the duties which are assigned to each member of the personnel staff.

For administrative purposes there is, however, an approximately logical division of work into: Employment, Health and Safety; Education; Research; Service; Adjustment and Joint Relations.

Before enumerating the detailed responsibilities under each of these heads it is well to indicate the general basis of this classification; for no division of work in the personnel department can completely satisfy every demand of logic.

In general, employment covers all the work entailed in securing a willing and effective working force.

Health and safety covers all the work of personal hygiene and of maintaining the plant in such a condition that the health and physical integrity of the workers is conserved and improved.

Education covers all the training activities of the plant.

Research includes those activities of intensive job study and of perpetual plant analysis—labor audit—which are essential for securing a basis of fact on which decisions about terms and conditions of employment can be based.

Service includes all the miscellaneous activities such as recreation, cooperative purchasing, etc., which are less directly related to the production problem than such matters as selection and training for the job.

Adjustment and joint relations cover all the efforts—by individual conference, shop committees, company unions and collective bargaining with labor unions—to settle upon the terms of the labor contract and to adjust difficulties which have arisen either as to those terms or their fulfillment. This division is interested in permanently maintaining a relationship

between managers and men which is characterized by understanding, freedom from complaint and goodwill.

Employment.—Under the designation of employment, the following duties are usually assigned:

1. Knowledge of:
 - (a) Labor market and the sources of supply
 - (b) Work requirements—use of job analysis and job specifications
 - (c) All wage rates paid
 - (d) Hours of work and other terms of employment
2. Selection including:
 - (a) Preliminary interview
 - (b) Interview
 - (c) Hiring
 - (d) Follow-up of references
 - (e) Physical examination
 - (f) Other special tests, including intelligence and trade tests
3. Introduction to plant and general instructions to new employees on company policies
4. Follow-up of new employees at the job
5. Recommendations for transfers and promotions
6. Interview all leaving employees:
 - (a) To insure fair consideration of their case
 - (b) To discover reasons for leaving
 - (c) To analyze and pass upon discharges
7. Compilation and care of records of:
 - (a) Applicants
 - (b) New employees
 - (c) Adequate individual progress records

Health and Safety.—Under health and safety the following duties are usually assigned:

1. Recommending of standards of physical fitness for workers at different jobs
2. Physical examinations of:
 - (a) Applicants
 - (b) Present employees
 - (c) Re-examination of those with special disabilities
 - (d) Special oversight of workers exposed to industrial hazards
3. First aid work. Hospitals
4. Treatment of:
 - (a) Surgical and accident cases
 - (b) Dental cases
 - (c) Ocular cases
 - (d) Medical cases
5. Giving of individual medical advice—home service.

6. Systematic plant inspection by:
 - (a) Safety engineer
 - (b) Members of general and departmental safety committees
7. Cooperation with proper authorities in reporting all accidents
8. Control and reduction of accidents:
 - (a) Following best building practice
 - (b) Safeguarding hazards
 - (c) Safety organization and education
 - (d) Follow-up of accidents
9. Compensation payments
10. Systematic check-up of all working conditions:
 - (a) Cleaning
 - (b) Ventilation, and humidity
 - (c) Lighting
 - (d) Heating
 - (e) Washing and bathing facilities
 - (f) Toilet equipment
 - (g) Dressing rooms
 - (h) Lockers
 - (i) Drinking water
 - (j) Janitor and matron service
 - (k) General supervision of sanitary and working conditions
11. Prevention and elimination of communicable diseases, epidemics, industrial disease hazards, and special strains of industry:
 - (a) Fatigue
 - (b) Mental strain
 - (c) Motion study
 - (d) Working hours, rest periods
 - (e) Special problems connected with women's work
12. Cooperation in study and investigation of absences
13. Adequate records and statistics on all health matters:
 - (a) Physical examinations
 - (b) Sickness
 - (c) Treatments
 - (d) Accidents
 - (e) Occupational diseases

Education.—Under education the following duties are usually assigned:

1. Training courses for executives
2. Training courses for foremen, assistant foremen and instructors
3. Training new workers in company policies, and in knowledge of the uses of the company's product
4. Apprentice courses
5. Vestibule schools
6. Part time continuation schools
7. Job instruction
8. Company publications

9. Suggestion systems
10. Bulletin board information
11. Circulation of magazines and library books
12. Organization of educational clubs
13. English and naturalization instruction
14. Training for:
 - (a) Transfers
 - (b) Promotions
 - (c) Inspection
15. Training in:
 - (a) Personal hygiene
 - (b) Safety
16. Cooperation with outside educational agencies

Research.—Under research the following duties are usually assigned:

1. Job analysis and preparation of job specifications:
 - (a) Time and motion studies
2. Fatigue studies
3. Studies and recommendations as to wage rates
4. Studies of cost of living
5. Perpetual labor audit of the factory
6. Study of current experiments of other concerns in various personnel activities, with recommendations as to their adaptability to the plant under consideration

Service features.—Under service features the following duties are usually assigned:

1. Recreation work:
 - (a) Noon-day and rest period programs
 - (b) Supervision of athletics
 - (c) Dramatics, musical clubs
2. Benefit and insurance schemes
3. Cooperative purchasing arrangements
4. Rest rooms
5. Summer vacations
6. Employees' gardens
7. Supervision of company housing
8. Thrift activities
9. Cooperation in the maintenance of adequate local housing, transportation, civic activities of all sorts, public health, primary education, etc.

Adjustment and Joint Relations.—Under adjustment and joint relations may conveniently be grouped the following duties, most of which would not be handled by the personnel depart-

ment alone but in conference with the other major department or departments which are also immediately involved:

1. Handling of questions of shop control, *e.g.*,
 - (a) Adoption of shop rules
 - (b) Enforcement of shop rules
 - (c) Handling of grievances and complaints
2. Adjusting questions of discharge
3. Cooperating in the supervision of shop committees
4. Adjusting the terms of employment
 - (a) Wages
 - (b) Hours
5. Conferring with shop committees or labor unions with which joint relations exist, on all matters of common interest

There are other activities which are no less important but which it is less easy to classify under specific functions. There is, for example, the important work of familiarizing the other executive departments with the work of the personnel department, and of educating those departments into a proper appreciation and use of a wholesome point of view and procedure in human relations work. We shall consider this function in a chapter on "coordination of policy."

There is also a real responsibility upon the personnel department to keep in touch with the related local and national organizations and movements. Problems of labor legislation and labor law enforcement are of increasing magnitude in industrial relations work. Facts about collective bargaining, shop committee developments and the growth of different types of labor unions should be kept currently accurate. And relations to employers' associations and employment managers' associations should be kept up in order that the experience of other firms may be constantly drawn upon.

It may be said, in short, that it is the ideal of personnel management to administer all those activities not directly related to supervision of the worker on the job, where contact with the workers is direct and essential. It is the department of personal contacts.

And it is, in the second place, the branch of the management which has the responsibility for keeping the fact that workers are human beings central in all managerial thinking. It is the department of management which specializes in intelligence, insight, patience and sympathy; and is therefore primarily concerned with the preservation of goodwill and working morale.

Organization Charts.—Chart I shows the major functions of the personnel department and its vital relation to the individual worker. It illustrates graphically the thesis about which this book is written: That the individual is the central value and end of the personnel department's activities.

In order to suggest a grouping of functions which conforms to the conventional arrangement of organization charts, Chart II is included. The effort in this diagram is only to restate in terms of administrative divisions and duties what the first chart also presents.

Chart III shows the lines of authority and responsibility in the personnel department.

A further chart showing the relationship of the personnel department to the other departments will be considered in connection with Chapter XXVI.

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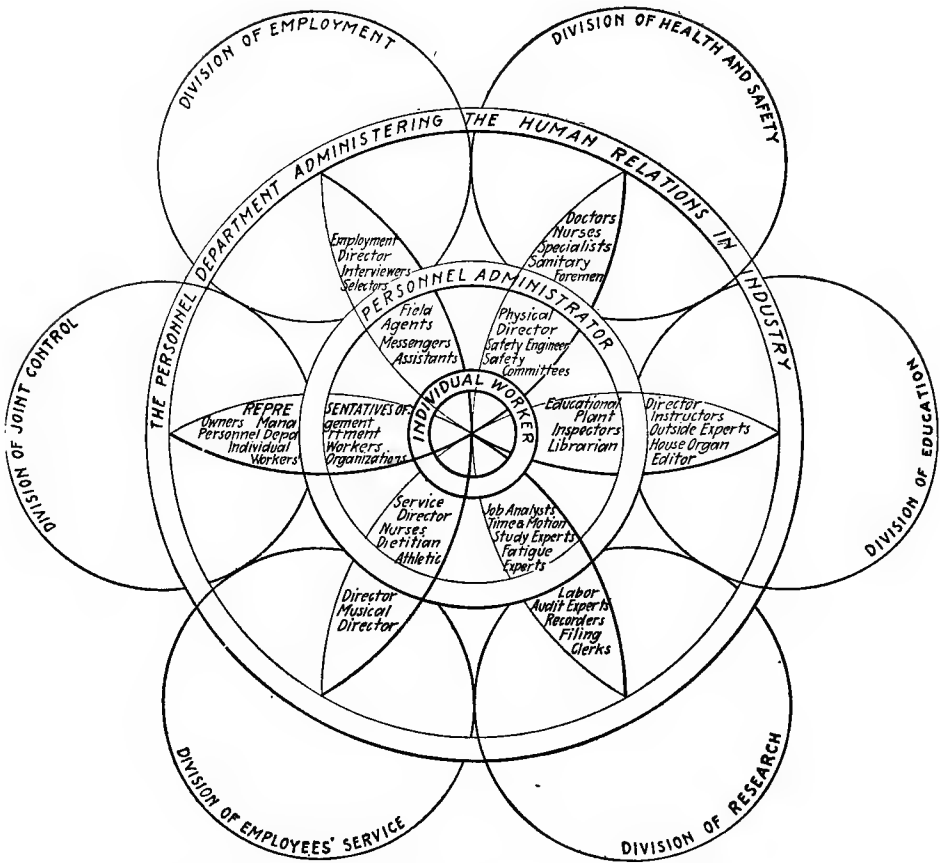


CHART I.—Personnel Department: Interrelations and Functions.

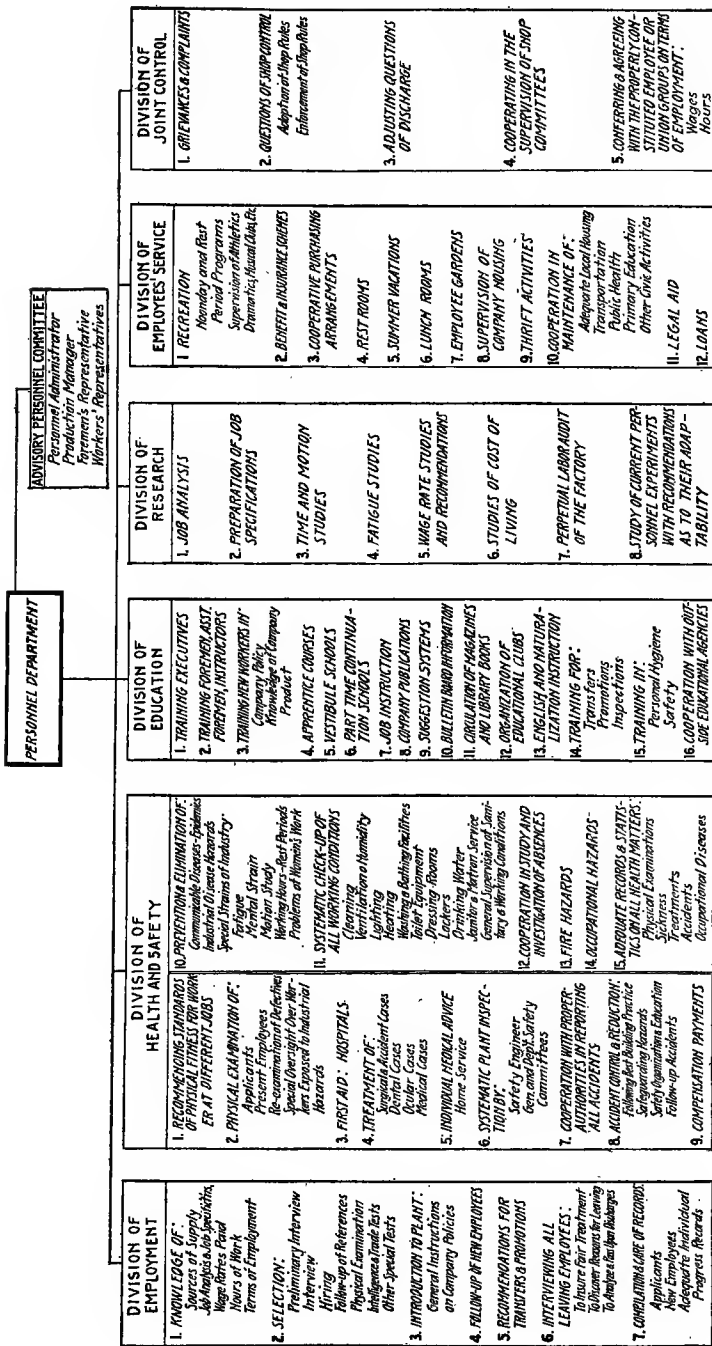


CHART II.—Personnel Department; Its Functions and Administrative Divisions.

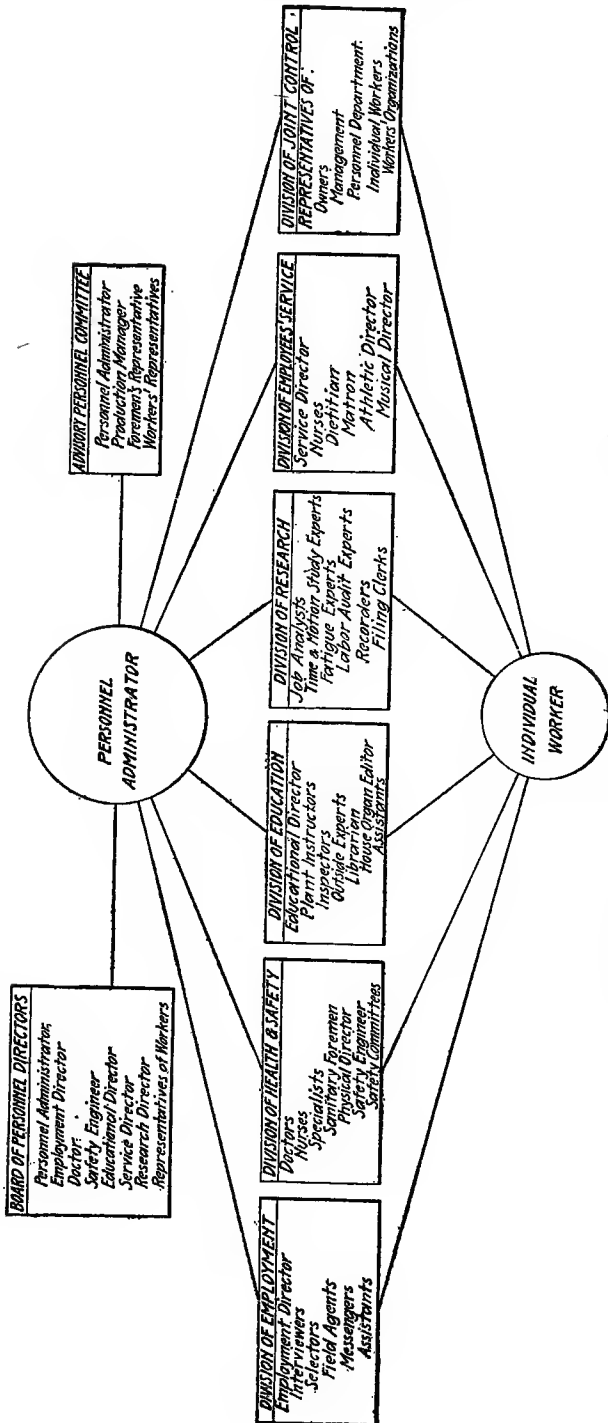


CHART III.—Personnel Department; Chart of Authority.

CHAPTER V

SOURCES OF LABOR SUPPLY

Managers who are fortunate enough to be building new plants today, decide upon their location with an eye to the availability of the kind of workers which their industry requires. Managers whose plants are located where they are without careful consideration of the sources of labor supply are frequently at a disadvantage which only deliberate efforts can overcome. And those deliberate efforts at cultivation of sources of labor supply are increasingly being recognized as legitimate and profitable.

“Labor scouting” was a familiar activity before the war, which became deservedly unpopular with progressive managers during the war because it meant “stealing workers” in ways not altogether honorable nor conducive to shop and individual efficiency. Cultivation of sources of labor supply must be a more considered, scientific and justifiable procedure than scouting. It must be rather an attempt on the part of managers so to bring the advantages of working in their plants before qualified groups of workers, that they will want to apply for any openings which occur. It is a matter of organizing the community’s goodwill toward the plant—of creating an attitude toward the factory in working class centers which makes people really interested to apply for a job. It is creating a legitimate differential between the desirability of working in any plant and the superior advantages of working in a particular plant.

In a campaign to cultivate the proper sources of labor supply for a plant, it should be possible to presuppose two things; that the company is doing all it can to keep employees with it continuously so that, except when expansions in plant occur, the need for new workers will be minimized; and, secondly, that it knows accurately the kind and quality of working ability which it needs.

On the first point, it should be remembered that some of the best corporations spend comparatively little on cultivating sources of supply, and on selection; their working force remains sub-

stantially intact year after year,—which is certainly the desirable objective for most plants.

On the second point, it is true that many plants in the absence of careful job analysis do not know how much ability and what kind of ability their work calls for.

But assuming that the company does know its labor needs, it can undoubtedly by deliberate efforts, improve the quality of the applicants from among whom it can select. These efforts would naturally emanate from the personnel department; and they must largely take the form of personal contacts. Someone from the personnel department should be allowed time in which to come to know the community agencies and leaders who are likely to be in touch with the properly qualified workers.

Local teachers and school superintendents, priests and clergymen, post-office employees, lodge officials, newspaper reporters, even car conductors and store-keepers—all these in medium sized and small communities are in touch with workers of one or another grade of skill.

Especially is it valuable to develop personal associations in the foreign colonies; with leaders, bankers, priests and editors in foreign speaking groups. Confidences which are genuinely established with such groups help greatly to minimize serious misunderstandings which might otherwise develop with groups of foreign-born workers.

The same is true of relationships with local trade union groups and with public employment offices. The value of personal acquaintanceship as the basis for subsequent dealings is tremendous; and the personnel manager is wise who allows and encourages his assistants to spend some time in maintaining friendly associations with all the useful community organizations.

Possible Sources.—Enumeration of actual sources of labor supply would be a prolonged task, since the sources tend to vary with the size of the community. There is, moreover, one technique of cultivation in the small town, another in the small city, still another in the large city.

One thing may, however, be said of the problem in every locality. Success depends upon the reputation which the company has in the community, for fair dealing, for adequate terms of employment and for decent working conditions. Without these, workers may come but they will not stay.

It is also generally true that friends of present employees are

a quite reliable source of worth-while new workers. Some firms find this to be so preeminently true that they pay employees a bonus of from \$2 to \$5 for new workers whom they bring in who stay more than a given number of weeks.

Many firms in both large and small communities encourage written applications from people who are elsewhere employed but would like to change. They find that people who will write in this way are usually steady, ambitious workers who, when they change at all, stay for a considerable time.

Casual newspaper advertising is used successfully by some firms; but it is usually regarded as a last resort.

The graduates of grammar and high schools are systematically canvassed by some employment managers both for factory and office positions. Well equipped applicants are also frequently found in business colleges and trade schools. In Minneapolis these schools keep in close touch with the employment opportunities in twenty-four different trades. Many of these educational institutions give technical courses in addition to regular courses. They are shaping instruction increasingly in terms of business and social values so that pupils may be prepared for rapid advancement in industry. Boston, Philadelphia, and other cities practise even more active cooperation between education and industry for improving sources of labor supply. Pupils are given positions in stores on Saturdays or during vacation periods and encouraged to fit themselves for a useful industrial life.

In the smaller communities house to house canvassing has even been resorted to by companies which were short of people. If tactfully done, such calling may help to establish the factory favorably in the minds of local people and encourage them to apply. Often workers who go some distance to their work are glad of a chance to change to a factory which is within walking distance. Indeed, some firms are saying today that they prefer not to hire people who live more than a mile and a half from the plant.

Where there are collective bargains or strong unions, the union headquarters is usually a source for craft workers. Some employers have felt compunctions about patronizing the union offices; have felt that they thereby in some way admitted a condition of union ascendancy. This is, of course, a shortsighted attitude since if managers would go half way to deal with the unions in this matter, they could save much time and expense in locating competent workers. If only a personal connection

is made by the employment department with the union office, the union will usually help to secure workers to the best of its ability, especially in plants with which it has collective agreements. Indeed, in trades which have reached any large degree of organization the presumption is usually that the more energetic and able members of the craft are in the union and available through the union offices.

Ideally, however, under conditions of collective bargaining, we believe there is much to be said for having employment offices run jointly by the employers' association and the union. This tends to put them on a business footing, to assure prompt service which is satisfactory to both groups. And it has the further important value of pooling the local labor reserves of the trade.

Such a pooling process should ultimately, of course, extend beyond the boundaries of an industry. There should be some central agency or group of agencies through which information about jobs could be cleared not only for workers going from one plant to another but for those going from one industry to another and from one locality to another.

Public Employment Offices.—In other words, from the point of view of a scientific organization of the labor market, there is an important place for an efficiently run clearing house for all employment information. Such a clearing house should, if properly administered, be a useful source of labor supply to the majority of plants. But for the clearing house to be valuable, it should be country-wide in extent, non-competitive, free, and in possession of some technique for trade testing or individual rating.

This is only another way of saying that such an employment service should be a public function. During the war a public employment service was created which despite inevitable limitations due to its emergency character, demonstrated what might be done to supply employers with information about available workers, and workers with information about available positions.

It is no part of our task to meet the obvious criticism which can be brought against the efficiency of that service in certain localities. The practical difficulties which employers encountered may have been, and in some cases undoubtedly were, extremely annoying. But those difficulties certainly do not offer a basis for refusing to recognize the essentially sound arguments for the continuance and improvement of the service.

Managers must recognize in a fresh way how necessary continuity of employment is to the average worker. They must recognize that the time between jobs will be greatly reduced, that the morale of workers will be improved, and that the underlying working class fear of unemployment can be minimized only if there exists an efficient and universally operating agency of information through which all openings are registered and practically all applicants cleared.

Our plea is for the endorsement by employers of a public employment system, for a concerted effort by managers to get it reorganized, for a patient attempt to use it and cooperate with it, even if results do not seem at first to warrant the attempt. This country will never reduce casual employment and underemployment as it should be reduced until we consolidate on a national scale all our labor reserves. Only so can we rid ourselves of that astounding anomaly of the present labor market: That "a rising demand for labor is no cure for unemployment."¹ By which is meant that a permanent cause of considerable idleness is the delay experienced by idle workers in trying to locate new positions by the tedious, wasteful and discouraging process of "peddling their wares" from one factory to another.

Once managers become really alive to the damaging results of unemployment upon working class morale, they will be ready to help in building a system of public employment offices which will be in fact what they should be in theory,—the principal source of factory and mercantile labor supply. There are, of course, various ways of achieving this end of a consolidated labor market and source of labor supply. It may be done by the presence of corporation employment workers in the public offices. There may in the organized industries be cooperative employment offices through which the bulk of the shifting within the industry takes place, leaving only the shifting between that industry and others to the public offices. There may be agreement between the employment manager of a concern and the public office that only applicants who come through the public office will be interviewed. This method was used with some success by one or two plants in a New England city where the public office proved competent to act as a central clearing house.

¹ See the brilliant analysis and exposition of this thesis in the fundamental study of the labor market by WM. H. BEVERIDGE, *Unemployment—A Problem of Industry*.

But as long as the proper end is held in view, sensible methods will be devised. The aim must be to have the sources of supply become as unified as possible. It will save employers and workers alike hours and hours of valuable time as soon as agreement can be widely reached that in one agency, and in one agency only, can all get what they want; that in one centrally organized system of offices all jobs are known and all unemployed workers are registered.

Further Sources of Labor Supply.—The newly discharged occupants of state, county, and municipal penal institutions are a hitherto neglected source of supply. Approximately half a million inmates are discharged annually into the various communities of the country. And the plight in which they are likely to find themselves is truly pitiable and a reflection upon the social conscience—not to mention business sense—of the community. For in many cases these men have a narrow margin of funds and few if any friends of such a standing that they can be effectually used as references in getting jobs. And they meet on all sides a prejudice against “ex-convicts” which all but forces them to remain outlawed and unproductive.

In this situation industrial managers have a responsibility for helping to reintegrate these unfortunates which they can no longer ignore. The Ford Motor Company of Detroit has set a notable example in this work of reintegration. It reserves one per cent. of its positions for men with prison records, helping them to develop into good citizens by offering them a second chance in life. Such employees need protection against denunciation, as well as careful and sympathetic oversight. There is every reason why industry should draw on this source, especially since by cooperation with penal institutions many employers have already demonstrated in a quiet way that former prisoners are not only “safe” to employ, but are usually eager for the chance to make good and establish a good name for themselves. And, of course, the economic and moral gain to society of reviving hope and courage in these men by helping them realize useful and satisfying lives, cannot be measured in money terms.

Limits upon Sources.—Complication is introduced into the procedure of cultivating sources when definite limits are put upon the selective process. Some companies, for example, have recently decided to employ only American citizens. And while it is easy to understand and sympathize with this position, it

seems doubtful whether such a policy can be recommended for wide adoption. Until our country makes far greater provision for free instruction in English and naturalization than is now the case, it is an arbitrary and in a sense unfair restriction from the workers' point of view to exclude them from employment on this ground.

The restriction that only applicants who live within a certain radius of the plant will be accepted, is based on a desire to cut down the time of coming and going from work, to create a homogeneous group of workers, to make community ties and industrial ties more nearly identical than is usually the case. This also is a policy that is of doubtful value for general application; although there may occasionally be conditions, especially where there are women workers, where such a policy is to be preferred.

The policy of excluding workers of some one race, religious affiliation or color is one concerning the adoption of which the peculiar local circumstances and prejudices manifestly have determining weight. It is impossible to generalize as to wise procedure. But it is not only important but essential where such exclusions are felt to be justified, to handle the procedure so that the basis of exclusion shall so far as possible be candidly acknowledged. Frankness in matters of this sort, provided always it is accompanied by kind and courteous treatment, is to be preferred to any hypocritical pretexts. And it is well to remember in this connection that not what is said but the way in which it is said, is what counts most.

Sources of Supply for Executive Workers.—Some manufacturing companies build up their executive staff almost entirely by "scouting." Their employment chiefs periodically visit universities, graduate schools of business administration, and technical institutions. These representatives describe in a personal talk to graduating classes business opportunities open in their industry, and invite application for positions. Since many educational institutions have added to their curriculum courses on the human relations in industry, alumni groups from these courses will be a valuable source for new workers in the personnel field.

In order to justify these university visits their effect should be twofold. Educational institutions should more vividly realize the demand of industry for trained material from which to select its future leaders, and be willing to adopt a broader outlook in their educational policy. And students should gain practical

guidance which helps them to get light on their half-formed opinions about a life work.

In calling attention to sources of supply for executive positions, it would be unfortunate, however, to slight the factory itself. Organizations which hold to a policy of "promoting from within" have in their own ranks people who know the business and its traditions, and who would be greatly stimulated by the assurance of promotional opportunities.

Conclusion.—Some experts feel that the necessity for cultivating sources of labor supply is in inverse proportion to the success of the company's personnel relations work. And there is something to be said for this view. But a certain amount of turnover is inevitable and it is good business to try to have those who apply of a progressively superior character. To secure this result, a degree of deliberate planning is usually necessary, no matter how popular the plant may be.

And the essence of this campaign of cultivation is that it shall be carried on by honest and genial assistants who know that the management is more than prepared to "deliver the goods," prepared to realize the hopes of opportunity and enjoyment which they have raised in the minds of prospective workers.

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CHAPTER VI

METHODS OF SELECTION AND PLACEMENT

Scientific and humanly sympathetic procedure in the selection of workers is a basic need in personnel relations. Much of the costly turnover and friction of modern industry is directly due to a haphazard choice of workers; and if those responsible for determining labor policies would but realize the importance of even a minimum of specific selection standards much waste could be eliminated.

The process of selection is one in which management and worker are really after the same result. The chance that each worker will really achieve a necessary degree of self development, depends in large measure upon the judgment with which he chooses his job. His special interest is not alone to find an opportunity for an adequate livelihood; he wants to get that livelihood out of labors which are reasonably interesting to him, have some significance and afford some satisfaction in the doing. The management's special interest is not alone to get enough "hands;" it wants to secure the cooperation of the requisite number of human wills—to secure a cooperation which will be continuous and intelligent. The time has come when no organization can afford not to take time enough with the induction of each new worker to assure that there is a reasonably successful adjustment of capacity to opportunity.

But to effect this adjustment is no easy matter; and the conclusion which can safely be drawn from the experiments of the last dozen years is that successful selection presupposes a new and separate staff department—a personnel department—to administer it. Indeed, the first step in standardizing selection procedure is to set up an employment office in charge of an executive specially trained and experienced in this work.

The Interviewer.—Given this responsible employment department, what are the minimum conditions below which standards in the selection procedure should not be allowed to fall?

Mention should first be made of the preliminary interviewer.

In many large plants it is necessary and desirable to have applicants passed upon in a general way by a first interviewer who is thoroughly familiar with the company's employment standards and who weeds out the obviously unsuitable candidates. This work calls for special consideration and courtesy; and some firms say definitely that they put their best qualified selectors at this initial point. The first company representative with whom the candidate for a job comes into contact—be he gateman, policeman or interviewer—cannot be too carefully chosen. Where there are several departments for which selection is being made and in which widely different types of skill are required, the value of this preliminary allocation of applicants to special interviewers is especially great.

Both the preliminary and the final interviewers should be persons of maturity. The work of selection calls for too much sympathy, insight, patience, and fineness of feeling to make it safe in the hands of the usual callow young clerk. Those who come into personal contact with applicants must always have a lively sense of the importance of the hiring process not only to the management but to the worker. Both interviewers may well be people who have worked in the plant. And knowledge of some of the European languages is in some cases indispensable.

Yet most important of all is a native, spontaneous interest in people—a sensitive regard for the nuances of personality; and a downright warm-heartedness with which is coupled a level head. The conditions under which a man is to be preferred to a woman as selector are as yet hardly defined; except that it is generally agreed that women workers should be hired by women interviewers. And some firms have found it true that women are also peculiarly successful in hiring men.

Use of Job Specifications.—Before an interviewer can work intelligently he should have in his possession detailed information as to the kinds of work the plant offers and the qualifications required in employees. This information should be available in writing as job specifications, but it should be supplemented by the interviewer's actual knowledge of the operation gained either by his having done it or by his having seen it done.

Job specifications are based on a full analysis of each job, and methods of compiling this data are discussed fully in connection with that topic.¹ It is sufficient here to suggest that specifica-

¹ See Chapter XVIII.

tions have two broad functions—to describe and define process, and to describe and define the personal qualifications needed for carrying on the process.

In connection with the former, it is necessary for the interviewer to know and discuss fully with the applicant the length of time required to learn the job, its educational requirements and advantages, its seasonal features and probable duration, the rates of pay and the average output for piece, day and week work, and the possible occupational disease, fatigue, and overstrain involved.

Again, it is important to understand the mental and temperamental qualifications. Ability to learn,—to adjust oneself to the conditions imposed by a given job, and to master its difficulties,—is generally considered the most necessary qualification, while general intelligence and information come next.

Character values are more difficult to appraise than are any of the other qualities, yet they are highly significant. “In the vast majority of cases,” says Link, “the moral traits that an individual displays are determined by two variable conditions. These conditions are first, a liking for a certain kind of work for its own sake, and secondly, a liking for the work for the sake of the rewards which it makes possible.”¹ Whether one agrees with Link or not, one is forced to admit that today practically the only character estimates that are of value are made after a period of actual work on the job by those in close personal contact with the worker.

Job specifications can never be a substitute in the employment office for the interviewer’s concrete knowledge about the jobs for which he hires. But as an organized body of data they have considerable value, especially in the view they may help to give the applicant of the job’s possibilities.

Requisitions for Help.—It is essential to any standardization of employment procedure, that the selectors have some time in which to carry on their work. This must mean practically, that they are informed at least 24 hours and preferably 48 hours in advance, of a department’s needs. Where skilled people are in demand, or where an increase in staff is taking place, an even longer time is necessary. Delinquent foremen are usually brought to terms on this matter by the establishment of a rule that requisitions calling for help in advance will be honored

¹ LINK, H. C. *Employment Psychology*, p. 205.

prior to those calling for assistance at once. There will, of course, always be emergency calls; but the effort should be to get foremen to give longer and longer notice ahead of positions to be filled.

The Waiting Room.—Companies which wish to secure the goodwill of prospective employees will see to it that the atmosphere in which they are hired is cheerful and as unrestrained as possible. First impressions are too important for any opportunity to be lost to start the worker right. The waiting room should for this reason not be hidden off in some out of the way corner of the plant. It should be in a place accessible to the street; it should have air and sunshine; there should be a place for applicants to sit down while waiting. Usually separate waiting rooms for men and women are desirable; and often separate rooms also for skilled and unskilled workers.

Adjoining the waiting room should be the interviewing booths, so arranged that each applicant can come into completely private conference with the interviewer. The equipment of these booths should be simple—a chair for the interviewer, one for the applicant, and a small table for pencil and paper located at one side.

It is definitely a part of the new standard practice in selection that the interview be carried on in private. By this one provision alone, many plants would greatly improve their hiring methods and results.

The Interview.—In the interview the applicant should be met as far as possible as an equal. He should be put at ease and not be hurried; he should be provided with an interpreter whenever necessary. Questions which are too direct or too bluntly put are to be avoided at the outset. A fair chance for each applicant to present his own case is essential. The aim should be to have the process of selection one of self-analysis, self-direction, self-placement or self-elimination.

There is suggestive value for a point of view in interviewing in Mr. Link's prophecy that, "it will undoubtedly be commonly recognized in time that the entire aim of employment psychology is to attain the viewpoint of the applicant, and to further his interests by selecting him for the work which he is best able to do and at which he will be of greatest value to society and to himself."¹

The examiner who gets this idea of the purpose of his work will

¹ See LINK, H. C. *Employment Psychology*, p. 375.

inevitably be courteous and patient; he will inevitably have proper regard for the natural reserves of applicants and will do nothing to impair their sense of self-respect and self-esteem.

The requirements of the job and the standards of employment in terms of age, sex, strength, special abilities, etc., should be so set forth that the worker can draw his own inevitable conclusion as to his fitness for the position. Indeed, the applicant for whom there is no opening should be so treated that he himself is conscious of his own inability to qualify, and in removing himself can testify that the company is one in which employees are properly selected and given every opportunity. One corporation known to us makes it a rule to treat rejected applicants with such consideration that their goodwill toward the company is not only retained but increased.

In making a fair bargain with an applicant, perhaps the most necessary measure is to give him an honest evaluation of the job. Overselling the job, misstating its opportunities for advancement and pay, create only dissatisfaction. The physical environment, the occupational hazards, the hours and the causes of discharge should be truthfully pictured. Many times the overselling of a job could be checked if the applicant were shown the job specification sheet himself, and allowed to ask questions of the interviewer. Even better, of course, is a chance for the applicant to see the work itself, so that he may form his own estimate of it. This is a practice which appears to be gaining in favor and use.

Interviewing Blanks.—If the interviewer is favorably impressed and wishes to place the applicant, he will use an information blank on which to write the data that he has gathered. This either takes the form of an "application blank" or an "interviewer's blank," or in some cases both. The former is spaced to receive the name, address, age, nationality, education, former experience, etc., while the latter is arranged to contain the interviewer's estimate of the applicant, and the results of the physical, mental, skill and trade tests.

It is at the point in the interview after the usual information about the applicant's history has been secured, that any special tests are introduced. We shall therefore devote the next few sections to a brief mention of the most scientific of these.

Special Tests.—The use of various psychological and trade tests by the army during the war brought a great improvement

in their technique and provided solid evidence that they were worth developing and applying in new fields. Especially were the general intelligence tests and the trade tests utilized on a scale which brought significant evidence of their possible value to industry. Application of both types of test to factory work has been slow in coming, however, because the adaptation is admittedly experimental and requires at least in its initial stages a high degree of expert skill and experience. Even before the war there had been efforts, it is true, to apply intelligence tests to certain types of work—more especially office work; and these efforts were fairly successful. But their use in this way was confined to a few large corporations which were willing to venture into an admittedly experimental field.

It is, therefore, too early to say with precision what the place of special tests in industry will be or should be in the immediate future. But we do know that it is the first duty of managers who are inclined to consider innovations in the direction of scientific methods of selection to understand their nature and limitations. And there are a number of conclusions about such methods which apply generally, and hence may be first considered.

The tests should, of course, be devised by experts and revised only by experts. The form and content of the test is determined by scientific and statistical considerations which the layman cannot pretend to know. The checking of the tests against the facts of people's working ability on the job is a problem of correlation which at the outset only the expert who installs the tests should handle. But the expert should not only install and check up the test at its inception; he should check results periodically to be sure that all the questions are of value in disclosing the qualities to which an index is being sought.

Another problem is to decide upon the qualities which it is desired to test at a particular kind of work and to be sure always that the test is actually succeeding in detecting them.

Great care is necessary, also, in the use of the results of tests. They are, at least at the present stage of their development, not positive proofs; they are contributing evidence to be weighed in relation to other factors. And in the last analysis, as all the experts in this field agree, the ultimate test of a worker's adaptability for a job is the way in which he does it. This means that the use of special tests as the sole basis for selection or rejection

tion of applicants would in general be unwarranted today. They should not, says one expert, "be given for the sake of elimination, but for the sake of placing each individual in the position that requires his particular degree of intelligence."¹

Intelligence Tests.—General intelligence tests are now available which throw considerable light upon an individual's mental alertness, speed of learning and mental capacity.² And there appears to be usually a correlation between general intelligence and that quality of effectiveness in action which is commonly spoken of as "ability to get on in the world." The tests "do not measure loyalty, bravery, power to command, or the emotional traits that make a man carry on. However, in the long run these qualities are far more likely to be found in men of superior intelligence than in men who are intellectually inferior."³

Within these definite limits in which intelligence tests claim to be valuable, they have proved exceedingly useful. But those limits should be kept clearly in view. The intelligence test appears to offer little evidence as to the individual's total intellectual equipment. It is distinctly not an index to specific mental traits, nor to moral characteristics such as honesty, trustworthiness and the like. "No psychologist," we are told, "has as yet presented us with such a complete and comprehensive analysis of the mental aptitudes that are essential for any single occupation."⁴ And, it may be added, even if such aptitudes were clearly known, methods of identifying them still remain to be discovered.

¹ ARTHUR AND WOODROW. An Absolute Intelligence Scale: A Study in Method. *Journal of Applied Psychology*, v. 3, No. 2, June, 1919, p. 119.

² It is beyond the scope of this chapter to describe the substance and methods of using intelligence tests. The reader is referred for adequate treatment of this technical problem to—

Personnel Work in the U. S. Army. Committee on Classification of Personnel in the Army, War Department, Washington, 1919.

Army Mental Tests. Committee on Classification of Personnel in the Army, War Department, Washington, Nov. 22, 1918.

The Personnel System of the U. S. Army, Washington, 1919, v. 2, Ch.10.

Copies of the intelligence tests used by the Army are available for free distribution.

To explain the uses of these tests one should see the examiner's guide now published by Henry Holt & Co., N. Y.

³ The Personnel System of the U. S. Army, v. 2, p. 228.

⁴ WHIPPLE, G. M. The Use of Mental Tests in Vocational Guidance, *Annals, American Academy*, May, 1916, p. 196.

Nevertheless intelligence tests can helpfully be used to reenforce decisions in cases where there is doubt about which of two or three workers, otherwise equal, should be selected for a position. It is probably true at many types of work that the selection of the candidate who, his other qualifications being equal, has a higher intelligence test score, is the wise selection. Of two workers who test equally at a trade test, the one who excels on the intelligence test would probably be the preferable worker; and he would also probably make the better gang leader or foreman. Of two assistant foremen whose ratings in technical knowledge, ability to handle men and other desirable characteristics are equal, advancement to foremanship would probably be wisely given to the one with the higher intelligence test score.

In the present state of experiment with this type of test its use can, therefore, be only broadly corroborative rather than absolutely indicative.

Trade Tests.—There is more reason to give weight to the results of trade tests as indices of working fitness than to the results of more generalized tests. Where the work in question has a varied and defined body of knowledge and methods with which the worker must be familiar, a trade test can usually help to discover the qualified journeyman.

A trade test is a set of trade questions to which specific and correct answers cannot be given by the applicant without a degree of trade experience; or it takes the form of pictures in which the applicant identifies and names parts or tools; or it is a performance test at some particular part of the work; or it may be any combination of these three. And the tests are devised with the intention of enabling the examiner to classify the worker into one of four grades of trade skill—the novice, the apprentice, the journeyman, and the expert.

Success in the use of this type of test depends largely upon the intelligence with which it is administered. It is claimed that the trade test can be applied successfully by one wholly unfamiliar with the trade; but conclusions from such a statement must be drawn with caution. For in the actual use of these tests in the shop, it will be necessary for the examiner to gauge how great a part such a factor as previous coaching for the test is playing.

In so far as they are carefully used, however, trade tests promise to bring real help in the work of classifying craftsmen. One of the points of standing controversy wherever craftsmen are

employed is the degree of their trade skill. A method of differentiating the journeyman from the apprentice and the expert from the journeyman, which workers and managers agree to be reliable, is greatly needed and would if jointly controlled eliminate considerable unnecessary dispute about the worker's trade standing.

Summing up the likelihood of trade tests being used in industry, Lieutenant Colonel W. V. Bingham gives the following interesting and authoritative judgment:

"Trade tests of this comprehensive type (*i.e.*, British method of securing systematic and exhaustive inventory of the candidate's trade ability) may some day find a place of usefulness in connection with the educational program of large corporations and of trade schools. Some employment departments will find value in the briefer American Army type of standardized trade tests, provided they have the funds and the personnel to maintain a competent trade test examiner and provided they continue the expensive process of progressive revision and restandardization which seems to be indispensable to offset the dangers of coaching.

"Most employment departments will not care to undertake this program, but they will come instead to the use of an abbreviated form of oral examination which we may call the 'technical interview.' These technical interviews will resemble oral tests in that they will consist of precisely such questions as have been found most useful in the oral trade tests. But they will not be administered with such rigor of procedure, nor will they yield a numerical rating. They will, however, serve to clarify the interviewer's opinion of the candidate's ability, and will be a convenient and very useful first aid in employment and placement."¹

Special Abilities Tests.—There is still another type of test, designed to discover some special ability or combination of abilities. The interesting methods discussed in Mr. Link's book² are almost altogether of this character. His tests were utilized to detect such abilities as manual dexterity, rapidity with which assembly work could be done and quickness of the eye. He makes no large claims for the success of tests of this type although his experience appears to leave him hopeful. He concludes his discussion, however, by saying that "the process of

¹ BINGHAM, W. V. *Measuring a Workman's Skill. Bulletin No. 30, National Society for Vocational Education, Feb., 1919.*

² LINK, H. C. *Employment Psychology. See also MÜNSTERBURG, H. Psychology and Industrial Efficiency.*

finding and applying tests is based upon the closest and most continuous study of *actual people actually at work*. Experiment must follow experiment in order to obtain the means by which the applicant's abilities can best be determined."¹

It is reasonable to draw the conclusion from the summary evidence here presented that selective tests are not yet ready to be applied throughout industry without great caution and continuous expert advice in their introduction and use. Great as is the promise of such refined methods of selection, managers will only injure a fundamentally sound idea if they apply it too quickly and with too much confidence in the results.

There is, for the immediate future, much greater need that managers should perfect the technique of the necessary selection procedure and adopt those minimum standards discussed in the other sections of this chapter. Until interviews are privately conducted, until ten minutes rather than two minutes is given to an interview, until an effort is made to show the man the work and follow him up on the job, there is little use in applying more scientific methods which presuppose at least some conception of the conditions which must surround a sensible process of selection.

Rating Scales.—A further device which is not a selective test in the narrow sense is the rating scale. But since it may be used to throw light upon the relative fitness of the members of a group for a given position, it may become an aid in selecting the person for that position. It has no value for the selection of new workers or new executives brought in from outside; but its use in selecting executives for promotion may come to be considerable.

The rating scale has been so well characterized and its possible application to industry so well suggested by a previous writer that we quote his statement.

A rating scale, says Mr. P. J. Reilly,² "is a practical plan, by means of which an officer's capacity and fitness for promotion can be gauged quickly and accurately. It is the official method of rating all commissioned officers. Each officer is considered in the important qualifications and is rated one at a time in those qualities, which are as follows: 1—Physical qualities; 2—Intelligence; 3—Leadership; 4—Personal qualities; 5—General value to the service.

¹ LINK, H. C. *Op. cit.*, p. 368.

² REILLY, P. J. The Rating Scale in Industry. *Personnel*, July, 1919.

"To obtain a standard for comparison, each rating officer takes five officers to represent grades from the highest to the lowest among the officers of a named rank whom he knows, and uses them as the measure for one of the five qualifications.

"The experience in the Army with the officer's rating scale has been extensive enough to establish definitely its value, and a number of industrial concerns have already introduced a rating scale in their personnel practice as a means of rating selected groups of executives or important employees. Interest seems directed especially to the use of a rating scale for foremen. Among the industrial companies which already have made beginnings in developing a rating scale for foremen are the following: Art in Buttons, Rochester, N. Y.; American Rolling Mill Co., Middletown, Ohio; The Domestic Engineering Co., Dayton, Ohio; and the Dennison Mfg. Co., Framingham, Mass.

"It is significant that attempts are being made to appraise the foreman accurately and to define his job. Such an appraisal of foremen must be in terms of their jobs and a definite knowledge of jobs is necessary. For the latter purpose, job specifications for foremen are already being developed by some companies so as to guide them in the selection, training and placement of foremen. For the rating of foremen, however, much dependence will be placed upon a rating scale in the future.

"In the preparation of rating scales, success will be achieved only if the following requirements are met:—

(a) They should contain those qualities which are essential in the judgment of a man's fitness for some specific purpose.

(b) They must 'weight' or indicate the relative value of the qualities deemed most essential.

(c) They must give a numerical expression of the degree in which a man possesses those qualifications.

(d) They must be capable of securing uniform ratings,—that is to say, two competent judges, judging independently must be able to rate the same man with only a negligible difference between their ratings.

(e) They must enable the judges to rate quickly and accurately.

"The scale was first tried out (in the Dennison Mfg. Co.) in a tentative way and when it definitely was adopted in its present form, it was presented to the foremen in a group conference. At this conference copies of the scale were distributed to each foreman and they were told precisely what the scale was, what it was expected to do, and why it seemed desirable to use it. Criticisms of the scale were invited from the foremen and everything was considered in the development of the scale that gave promise of being of help in obtaining an effective scale that could be fairly used."

We return now from the consideration of special tests, to the procedure of selection at that point where any existing tests have been successfully met and the applicant has been hired.

Progress Cards and References.—As a rule, the data gathered in the interview is a more reliable guide in choosing employees than references. For unskilled and semi-skilled laborers this is especially true. However, a new type of recommendation, called a progress card, is coming into use. It is modelled after the service certificates of the army, and contains a signed statement by the former employer as to the time that the man has been with the firm, his regularity of attendance, the kind of work in which he has been engaged, and the evidences of his initiative and reliability. If they become an accepted part of the hiring and discharge procedure they should be of real help in the problem of selection.

Despite their scientific value, however, such "discharge books" could obviously be used with serious injustice to the workers. And they are for that reason to be viewed with caution. Only under a union shop regime, where joint control over terms and conditions of employment was well established, could any such permanent and transferable record of individual characteristics or performance be fairly used.

The Applicant Who Must be Turned Away.—When there is no intention of hiring a man, it is poor practice to permit him to fill out an application blank. It gives him a hope for which there is no foundation, and clutters up the file with useless cards.

Some personnel administrators, when they are obliged to turn promising men away, attempt to secure work for them in other plants in the vicinity. In fact, in several industrial centers it is the custom for the employment managers to telephone to each other the first thing in the morning to discover what type of help is needed. They then make an effort to direct the right man into the right position whether in their own factory or in that of another firm. Helpful exchanges often take place. Such cooperative procedure in selection and follow-up has great possibilities.

Final Authority in Selection.—In the factory in which the personnel department has become well established, and the executive force, especially the foremen, have come to realize its helpfulness, it is probably advisable in most cases to have final authority in hiring rest with that department. This does not mean that those

under whose direct supervision the employees will work should not be consulted. Their estimates of the type of man needed, and their contributions to job analyses are very necessary. Their full approval of the final results of the selection is of course essential. Yet to maintain the plant's employment standards and to direct newcomers in the most intelligent way into work for which they show a liking, it has been found most satisfactory to have responsibility for engaging, selecting and discharging the manual workers under the personnel administrator.

Introducing the Worker to the Plant.—The next distinct step in employment procedure after selection is the introduction of workers to the plant. This also is a function of the personnel department. Upon the manner and spirit of this introduction the employee's first impression depends not a little.

The first step in this introductory process may well be an oral explanation of the company's policies. Some firms in addition to distributing an informational booklet, go over the contents of this handbook with groups of new workers in order to make perfectly plain the material it contains. This method of supplementing a reading which may never take place or may be hurriedly done, is highly desirable. It is with any group of people a mistake to think that the printed page can of itself take the place of verbal communication.

The information and regulations contained in the booklet cannot be too explicit. There should be no occasion for a misunderstanding about pay, hours, shop rules, safety regulations, provisions regarding tardiness and absence, overtime, training and insurance. After the items on these points have been made clear in conversation, the booklet which repeats in full the contents of the talk, should be distributed. It should be stamped with the employee's name and number and be used by him for reference.

The new worker is then ready to be personally conducted through the plant. In larger plants special messengers are available to show him the lunch, rest, and hospital rooms, and assign him his locker. They also point out the location of toilets, bubblers, exits and fire escapes; and explain the use of the time clock. Finally, they take him to the department to which he has been assigned.

The new employee should be left with the foreman only when the latter has time to give him the proper attention.

Specifically the foreman should be introduced to the newcomer by an intelligible interchange of names. The foreman might then put the worker in charge of an assistant or of an instructor, who would in turn be responsible for making the worker known in a friendly way to his working associates. They should be told his name, and he be told theirs.

From this point the procedure usually becomes a matter of training. Some firms take the new worker on a visit through the plant in order that he may know what he is helping to make and see the importance of his job in relation to the whole process. Some firms put the employee immediately in charge of a job instructor, and others also assign a fellow-worker to the new man to help familiarize him with the procedure of the plant—to act as a “big brother.”

Indeed, some plants make it a practice to have a higher executive—a general foreman or an assistant superintendent—introduce himself and chat a few minutes with each new employee in the departments under him. And the foreman himself can usually well afford to give some encouragement to the novice once every day during the first week.

To have the laborer enter upon his job thus with the manifest sympathy and knowledge of the entire organization, not only eliminates waste of time and misunderstanding but it tends to assure in the worker's mind a positive conviction that he is really wanted and welcome in the plant. Good manners and courteous treatment have a value in industry which is no less significant than it is in other social intercourse. It is a value that makes true courtesy worth striving for and worth studying to achieve.

Following-up the New Employee.—Careful follow-up methods are essential to round out properly a minimum program of selection and placement.

The importance of this follow-up is apparent. The largest percentage of labor turnover occurs during the first three months. The worker is at the outset in peculiar need of friendly advice and attention. The process is one in which the employment division, foremen, and instructors must all cooperate. However, the actual work of checking up the success of the selection is usually best done by the interviewers, who in well organized plants are being given the afternoons or the last days of the week to go into

the factory and talk again with those whom they have selected several days before.

The attitude with which all this follow-up should be done should reflect a neighborly and comradely spirit. The brotherhood bond in industry is so often destroyed by the machine, that acquaintance and goodwill are promoted only by personal effort. The foreman alone cannot restore it. The personnel department alone cannot restore it; nor the fellow employees acting alone. The process of friendly introduction and of coming to feel at home requires the studied but still spontaneous cooperation of all in the management, and of all the men.

In its assistance in transfer and promotion, follow-up has another task to perform. It estimates a man's all-round fitness for his job, studies his attitude, and measures his progress. And if the interviewer is found to be mistaken in his original placement, he assigns the worker to a position for which he is better fitted. The result is not only positive saving of time and expense in the induction of beginners, but also a longer tenure of office by more efficient and happier employees.

The Social Importance of Standards of Selection and Placement.—Never has the need of wise and humane methods of selection and placement been more imperatively felt than at the present time, when full conservation of all the factors in production is urgent. This chapter has suggested simply minimum standards,—standards below which no factory's procedure of selection need fall, and for which no great expense is entailed. It remains for individual plants to enlarge upon them as the results justify.

What the interviewer is really doing in the selection process is to distribute personal power. Progress in industry is from one point of view registered in the wise expenditure of personal energy and wise direction of individual talents. It is therefore not only good business but a public duty for the interviewer to adapt the diverse talents of applicants to the opportunities in industry in the most humanly scientific manner possible. It is his important contribution to a genuine industrial efficiency.

Control of Employment Standards.—Our discussion of selection has proceeded on the assumption that employment standards were immutably fixed by the management. We have spoken as though managers alone determined what degree of skill warranted employment, what length of prior training was

required, what age and sex of worker, etc., were necessary for given jobs. This is undoubtedly true today in the large number of plants.

But standards of selection are destined to be more and more subject to joint determination and control. Already wherever the workers are strongly organized they have considerable to say about just the above items; and the only serious problem is to see to it that this determination of employment standards takes place on an intelligent and socially satisfactory basis. For if these standards are too rigid, the supply of trained workers may become so scarce that they can command a relatively too large reward for their services, or good workers may be barred from socially necessary work.

Moreover, one of the employer's rightful objections under most "closed" or union shop arrangements is that employment standards are in reality set for him by the union which all must join who seek employment. The remedy in such cases may not be easy to apply; but it seems reasonably apparent.

The remedy is to make employment standards specifically a matter for joint negotiation. And this negotiation if it is to be any improvement on arbitrary decisions either by managements or by unions, must be based on facts which both admit. Such facts as are necessary are the product of job analysis and are unobtainable without job analysis. How this analysis is to be carried on, what matters it should study, what results can be expected,—these are questions whose consideration is deferred until a later chapter.

Meanwhile, it is our conclusion that employment standards and therefore all selection methods should be based on careful study of the work to be done, and upon agreement between management and men regarding those standards and methods which shall have force.

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CHAPTER VII

HOURS AND WORKING PERIODS

Consideration of methods of selection might reasonably be followed by a statement of the terms of employment at which new workers are engaged. Wages and hours constitute, of course, two of the major terms of employment; but our exposition of payment will be more illuminating if instead of coming now it follows our study of job analysis. We shall therefore consider only hours and working periods here; and then proceed to discuss the health of the worker and the conditions of the factory into which he enters,—in other words, his “working conditions.”

Our treatment of the hours problem will not attempt the impossible. There is today no scientific data at hand to *prove* what length of working day is the most “productive” in a sense which takes account of both output and human factors. And even if there were such data, it must be remembered throughout the discussion of these matters that, since working hours are fundamentally a matter for determination by a negotiating process, other considerations than science help to determine (and presumably always will) the length of working day and week actually adopted. The range of the bargaining discussion can no doubt be somewhat narrowed by joint possession of the facts; and for that reason we shall state what seem to us the relevant elements in the problem. But we shall attempt to prove nothing about the proper length of working periods. The purpose of this chapter is rather to enumerate the several topics relating to the time factor, upon which *some defined policy should be adopted*: and to suggest briefly the consensus of recent opinion and practice upon these topics.

A second prefatory word will save repetition as we proceed. Policy on all of the time factors should be clear, explicit, known to all workers, and acquiesced in by all workers. Acceptance and satisfactory administration of all the following items will therefore in most cases be better assured if there is prior conference

and joint agreement with the workers upon the terms adopted. Just because other considerations than absolute facts enter into the determination of working periods; just because individual and group desires, conventions and habits help to mold sentiment on this question, it will be better business to have a common understanding and an explicit agreement upon the time factors. Further reasons for joint action in this field and methods for safeguarding such joint action are discussed from time to time in subsequent chapters.

Furthermore, in discussing hours a combination of points of view must be borne in mind. Managers must remember that the worker is in the first instance a "physico-chemical engine" which requires time in which to renew wastage, by sleep and recreation; that the worker is possessed of a human nature which demands expression for a known variety of native impulses; that the worker is a member of a community with responsibilities toward family and state which he should assume and be competent to carry out worthily. Without the background of judgment and the broader approach to the hours problem which these points of view encourage, the manager will be in danger of seeking decisions on a too narrow basis of facts or opinions. The hours question like all the rest which we are considering, cannot be dissociated from the problem of securing the worker's interest, energy, and goodwill.

A reasonable limitation of working periods has, also, special values for the whole executive staff, especially for the foremen who are usually confined closely to their departments during every minute of the working week, and are likely to suffer from the narrowness which such confinement inevitably brings. Frequently foremen, assistant superintendents and technical experts are necessarily in the plant longer than any one else; and their long hours of continuous application contribute not a little to over-tiring and taking the fine edge from their executive capacity, and thus reducing the efficiency of the directive organization.

Hours of Work per Day.—That the question of the number of hours of work per day is at the present a controversial rather than a scientific one, is easily judged from the divergent practices and demands of workers. While the twelve hour day still persists in some continuous process industries, the ten hour day is retained by others. The nine hour day is still widely used in many plants;

the eight hour day is constantly gaining momentum in the industries where labor organization had not heretofore enforced it. And in the industries where labor unions are strong the seven hour day is in certain cases an actuality and the six hour day a demand.

The evidence as to the relation of hours to the long-time health and efficiency of the workers is by no means completely convincing. But it tends on the whole to show that under present conditions in most industries an eight hour day results in a high, if not the highest, productivity. A moderate amount of leisure is thus obtained; the plant is in operation during the daylight hours nearly the year through; the weekly output in well-managed plants appears to suffer little if any diminution in a reduction from nine to eight total working hours.

Maintaining the Output.—From the management point of view the effect of the shortening of the working period on output, even if it is not necessarily the only determining consideration, is highly important. Nor have we any desire to slight the problem, adhering as we do to the idea that the professional obligations of personnel managers are in the direction of getting needed production as cheaply as the maintenance of human industrial standards will permit. But so much stress has been laid upon the fact of reduction of output with the reduction of hours, that it is essential to point out that the number of hours worked is only one of a whole series of causes which affect the amount of output, and in nine factories out of ten *nearly all of the other factors are crying out for correction*. The whole complex of factors at the root of factory efficiency is, indeed, so infrequently understood, analyzed and controlled that one of the most astute of America's mechanical engineers dares to be quoted as saying that "if America seriously set out to eliminate all the friction in her industrial system, we may expect a four, or perhaps a two hour day. With production simplified and power utilized to its fullest capacity, we could probably produce all we want in less than six hours."¹ Even allowing for a degree of rhetoric in these sentences from a sober engineer, they point a moral to which all students of the science of management can at once subscribe. Indeed, another engineer says that our industry runs ordinarily at

¹ POLAKOV, WALTER N., in *The Great Change* by C. W. WOOD, pp. 100-111.

about 40 per cent. efficiency because of incompetency in factory management.

The point of this evidence is simply to show that efforts of managers to defeat proposals for shorter work periods do not necessarily prove that their introduction would be calamitous. Managements have usually found themselves able by better methods to cope successfully with curtailments in working times, which were at first decried as impossible. Historically, it has probably been true that improvements in management technique have been largely enforced by the pressure of competition or of labor demands. But the time has come when this should be true no longer. Just as fast as the science of management is understood to involve a *positive* and productive professional service, reasonable demands for reduced hours will be met at the outset by one supremely valuable effort—*by the aggressive efforts of managers to apply science to the whole range of management problems.*

This conception of management as a profession, standing ready to make truly scientific the application of human energy to materials, is destined as it extends to increase surprisingly the potential productivity of industry. And this conception should be borne in mind throughout the present chapter; otherwise we will be thought to favor a reduction in hours and hence in output which would be a serious loss. We do indeed favor what is today considered as a liberal policy regarding hours. But we are at the same time clear that any possible lessening in output from shortened work-periods can be more than compensated for by various improvements which managers and men working closely as a producing unit have at their disposal.

There is, to be sure, a point in every industry below which a reduction of hours will affect output adversely. But with increasing recognition not alone by the workers but by all students of social progress, that human nature must have a chance to express itself if the claims of parenthood, citizenship, and of industry itself are to be effectively met, efforts to reduce hours promise to be one of the most powerful stimuli to better management and to result, therefore, in a maximum utilization of interest and energy during working hours.

The objection is frequently urged, however, that opposition to shorter hours comes from workers who want to get as much pay as possible. In individual instances, this is no doubt true. But

the point which deserves consideration is the usual reason for this opposition, rather than the opposition itself. And the reason usually lies in a closely related problem—the problem of payment. Reduction in hours should, of course, if it is to bring the proper benefits to both sides, be accompanied by such changes in hourly and piece rates as will keep the income of the worker at least equal to that earned under the longer hours. Under these conditions any sporadic opposition of workers to shortened hours, tends to disappear.

Hours of Work per Week.—In practice the eight hour day results in a 44 hour week wherever the workers are strong enough to press their claim for the Saturday half-holiday. Such an arrangement of working hours is gaining wider and wider acceptance. The value of the half-holiday is felt to be great wherever it is adopted, since it provides a continuous period of week-end respite which is physiologically and socially valuable.

Indeed, the use of a 40 hour week, in which no Saturday work is done, but work runs eight hours a day for five days, is gaining ground. Originally adopted in some corporations as a summer policy, its adoption as a year-round measure is now being seriously urged.

A similar practice in use in one or two plants is to retain an approximately 48 hour week but to put all the work into five days. The benefits of a two day holiday to management and men alike are recognized. Machine and plant maintenance is better handled under this arrangement; less heat is required; the short and relatively unproductive Saturday is eliminated; the workers are able to have gardens and do more work for themselves around the house.

The Six Hour Day.—The movement for a six hour day began in earnest in this country with its endorsement by the American Federation of Labor at its 1919 convention. In England this shorter day has already been advocated by a prominent soap manufacturer. He has said:

“Under the present system of hours of work the thorough education of our children is practically impossible. An absolutely essential step in the direction of a more efficient educational system is the shortening of the hours of labor and the improving of the conditions of living for the worker.

“We are only just beginning to make a considered study of the inefficiency and resulting waste that is produced by fatigue. We can not

claim even yet that we have any very profound knowledge on the subject, but the wastefulness of fatigue has been abundantly proved by the researches already made. Therefore it is essential that work in the factory, the workshop and the office should be so arranged as to avoid fatigue, and by maintaining the general health of the workers, to prolong their activity and increase their skill and efficiency.

"Moreover, modern conditions of production requiring costly plant, machinery, and factory buildings make it obvious that such division of the 24 hours must be made as will (whilst utilizing the mechanical utilities to their utmost capacity so as to get as large an output from plant, machinery, and mechanical utilities as possible) tend to relieve the human element from fatigue. Only by so doing can we reduce to a minimum all overhead charges for interest, depreciation, and rent, etc.

"It is obvious from the above that when our modern industries are run on a less fatiguing system of say two shifts each of six and a half hours with half an hour off for meals (making six working hours in all per day), the efficiency of the worker by thus avoiding fatigue can be increased by at least 33 per cent., and consequently that as much work can readily be done in six working hours as under present conditions is done in eight. But in addition to the ability of the employee to produce as big an output in six hours as is now produced in eight, there would be the added advantage that the plant, machinery, etc., would be running for 50 per cent., longer time, viz., 12 hours instead of eight, which running of machinery would reduce the overhead charges proportionately and increase the output enormously."¹

Nor is Lord Leverhulme without supporters in this country. Mr. Polakov said in the previously quoted interview,

"The ten hour day has generally given way to the eight; and there is every reason to believe that the six hour day will soon prove still more economical."

The arguments for what may seem at first to be a drastic change deserve careful examination. Lord Leverhulme speaks, of course, from the point of view of a continuous industry (soap-manufacturing) when he says:

"We must have a six-hour working day for men and women and by means of six-hour shifts we must work our machinery twelve, eighteen or even twenty-four hours."²

¹ Industrial Health and Efficiency. Reprint of Final Report of British Health of Munition Workers' Committee, *Bulletin* of U. S. Bureau of Labor Statistics, No. 249, p. 83.

² LORD LEVERHULME. *The Six-Hour Day and Other Industrial Questions*, p. 16. For a careful statement by him to his board of directors as to the arrangement of hours under the six-hour shifts, see *Monthly Labor Review*, U. S. Bureau of Labor Statistics, v. 9, p. 160-1, July, 1919.

But even the use of two shifts of six hours would mean a 50 per cent. greater utilization of plant than is now secured on the eight hour day. This means reduced overhead and fixed charges. And the educational opportunities which would open to all workers with the reduced period of labor, would reflect both in the efficiency of factory operation and in the *quality of personality* which would be fostered. Finally, the consuming power of people increases both in range and taste as they have the leisure to enjoy the good things of life, and this in turn acts to stimulate a healthy increase in the demand for worth-while articles.

This is not said by way of advocacy of immediate adoption of the six hour day. It is said simply in explanation of the possible values of a movement which while it may be widely opposed as "economically unsound" or "impossible," should yet be understood as the sober business proposal of a successful manufacturer who has had the temerity to urge his board of directors to let him practice what he preaches, in his own plant.

Overtime Work.—The evils of a policy which deliberately encourages overtime work are grave. The fact of overtime tends to lessen the working pace in the normal hours; it increases fatigue and thus tends to emphasize all the consequences of fatigue—irregular attendance, sickness, physical debility. It tends, when long pursued, to increase labor turnover and to stimulate unrest.

There should, consequently, be a defined limit to the number of overtime hours of work per day and per week. Certain carefully drawn collective agreements already contain clauses regulating overtime, and there is good reason for including such provisions in all labor contracts. One recent agreement says, for example, that "overtime work shall be limited to six hours in any one week and one and one-half hours in any one day."¹ The reason for allowing this rather wide margin lies in the fact of the seasonality of the industry in question.

Night Work.—Night work has normally no justification outside of the essentially continuous industries. In these cases the tendency is all in the direction of three 8 hour shifts, which

¹ Agreement in Dress and Waist Industry in New York City as quoted in the *Monthly Labor Review*, U. S. Bureau of Labor Statistics, v. 8, p. 1559-60, June, 1919. The justification for "time-and-a-half" or double pay is in the effectiveness of the *penalty* it presents against excessive overtime work.

reduces somewhat the hardships involved. It may possibly be true that the deleterious effects of night work can be further lessened by rotating the workers on the several shifts at some agreed interval. But although this would distribute the night work over the entire force and give to all a reasonable amount of time in which the normal hours of work, play and sleep can be observed, it does involve a periodic readjustment of living habits which is found in practice to be very taxing.

In non-continuous industries night work is in the long run bad business. It is hard to fill the night shift; it is difficult to maintain the output at the expected quantity and quality; it is hard to provide a competent administrative organization. "Even for men," says an official English study published during the war for adoption as war-time policy, "night work is open to serious objection. It is uneconomical owing to higher charges for wages, lighting and heating. Lighting is generally inferior and supervision more difficult. Adequate sleep by day is difficult, owing to dislocation of ordinary habits or from social causes. Social intercourse and recreation can hardly be obtained except by undue curtailment of sleep. Continuance of education is generally impracticable. Finally it is unnatural to turn night into day."¹

The physiological objections to night work should be kept clearly in mind. It is the usual testimony that under night work (1) the worker gets less sleep than he needs; (2) he works least effectively in the early morning hours—three to five A.M.—because the bodily vitality is then at its lowest point in the entire 24 hours; (3) the lunch period is usually short and the factory facilities for providing a hot lunch are usually not operating during the night; (4) little work is done during the last hour of the night shift in the cases where the shift is over eight hours long.

Sunday Work.—The commandment that on six days man and his helpers shall labor but on the seventh day they should rest, has its sound foundation in human physiology. The English war studies of hours and output state their conclusions clearly as follows:

"At the commencement of the War Sunday labor, especially for men, was widely adopted in the hope of increasing output. The evidence, however, proves conclusively that Sunday labor is unpopular, uneconomical, and not productive of increased

¹ Industrial Health and Efficiency, *op. cit.*, p. 255.

output. . . . Where Sunday labor becomes necessary, arrangements should be made by a system of relief shifts that no individual worker is employed more than six days in the week."¹

The demands of civilization for continuous service in hotels and restaurants, transportation and telephone lines, the purveying of news, perishable food products, etc., make Sunday work today a necessity for hundreds of thousands of workers. In some companies this condition is met by one day of rest in fifteen. This is an unsatisfactory expedient for the worker and it does not meet the physiological demand for regular periods of rest. Employers in these industries as well as consumers must come to realize that the wage charge for a large enough staff of workers so that *each one can have at least one full day off in seven*, is a proper and economical part of the operating cost.

Holidays.—Saturday half holidays are being constantly extended; and at least during the four summer months, are widely granted. All day Saturday, especially during the summer, is given off without pay in some stores and a few factories.

In written collective bargains the public holidays which are to be observed are usually named. This is by far the most satisfactory policy since otherwise it often happens that the granting of holidays depends upon the amount of business in prospect and no decision is reached until a few days before the holiday. It is now true in most of the Eastern states, that a state or national holiday is observed in each of ten or eleven months of the year. The adoption of this one day off a month (especially where it can be added into the week-end period) is desirable from the human and production points of view. "The workers, refreshed and more vigorous, unconsciously start work on a higher level of speed and maintain that level permanently, whereas a reduction of hours unaccompanied by a holiday, *i. e.*, by a chance of breaking through settled habits of work, is generally very much slower in conducing to the desired reaction."² And in the same report there is the following valuable sentence. "The committees desire especially to emphasize the need for giving periodic holidays to members of the management and to foremen. They cannot take odd days off like the ordinary worker, and cases of temporary breakdown have been regrettably common." An

¹ Industrial Health and Efficiency, *op. cit.*, p. 255.

² Industrial Health and Efficiency, *op. cit.*, p. 91.

observance of all the legal holidays thus has its benefits for management as well as for manual workers.

Vacations.—The granting of a regular annual vacation with pay to manual workers is still the rare exception. Many companies give vacations to salaried workers; but managerial thinking about the condition of wage earners has not been sufficiently in scientific and physiological terms to bring the annual rest period into wide use. A liberal vacation policy does, of course, presuppose a fairly stable working force in which the labor turnover is small and confined to a small per cent. of the workers; and such a condition of stability has not in the past been a frequent characteristic of American industries. But as more and more plants take steps to reduce turnover and to create a permanent body of workers animated by goodwill, the problem of vacations will demand definite attention.

It is, indeed, probably true that the need for a complete rest from industrial work for at least two weeks a year grows greater as time goes on. The strain of industrial life, created by a combination of nervous anxiety about work and livelihood, speed of work, noise, and repetition of work at jobs in which the worker finds little to interest him,—this strain must be off-set if there is not to be a progressive deterioration of vitality and of personality. The physiological reasons for annual vacations, growing out of industrial conditions distinctly unfavorable to the human nervous system, are therefore cogent.

Some firms have used vacations as a reward for regular attendance or some other "good behavior;" others vary the length of the vacation with the length of service. Still others shut down the plant for ten days or two weeks in a period including the Fourth of July or Labor Day, and overhaul machinery or take stock. Concerns in this last group do not usually, of course, pay wages during the shut-down. And there is a final condition of self-determined vacations which is usually more prevalent in small-town plants than in city factories. Often the workers leave for the summer to work on the farms or at summer hotels. This change of work may be quite as beneficial from a physiological point of view as a complete rest; but there is, of course, no certainty of re-employment, and the factory is meanwhile in a most uncertain state about its summer labor supply.

A deliberate vacation policy for all workers who have been with the company a year seems to us the highly desirable stand-

ard practice. This holiday should be *with pay*—with the payment in advance of at least half the vacation salary, in order that the worker may finance a real change of location,—the rest of the pay to be given when he returns.

Two weeks is the minimum period in which any thorough physical recuperation can take place; and a longer time would be preferable. It will therefore be desirable to grant employees who have been in service longer than two or three years, a longer holiday. But to make any vacation a contingent of "good behavior," is like making sleep or three meals a day a reward; in reality all are demanded by the dictates of sound hygiene. The Federal government's policy of a month's vacation a year, which applies to all its manual workers in the civil service, may seem at present to be a policy of undue liberality; yet it is an enlightened and human policy which reflects in improved health, work and goodwill throughout the year.

Objection may fairly be urged that some workers will not know how to use a vacation; that they will simply sit around their own homes and get no really beneficial change. This is likely to be all too true where the vacation habit is not formed, unless some conscious effort is made to get the employee interested in an outing. Leisure, like money, it should be remembered, is something that one who is customarily without it, has to learn how to use wisely. And in addition to not having resources in pleasant avocations, many manual workers have not the savings on which to draw to pay for a trip for themselves and families and they do not know where to go.

The company which sees the human benefits of an established vacation policy for all employees, should at least during the first few years of the adoption of the policy, help its employees by encouraging savings and by maintaining (or cooperating in the operation of) a vacation bureau which will know all about fares, boarding houses, camping facilities, and prices at the available country or seaside resorts. There is a degree of inertia to be overcome in getting the family or individual who is unaccustomed to a vacation to go to the country or shore, which should be fully reckoned with in advance, but which it is well worth the effort to overcome.

Length of Working Periods.—The adoption of the eight hour day usually solves automatically the difficulty of the too-long working period, since four hours of work are done in the morning

and four in the afternoon. It is now fairly well established that five hours of uninterrupted work is too long a period in which to try to sustain production at the maximum.¹ The four hour period is more justifiable. Yet every industry and every job requires study to see what from the production standpoint is the best length of uninterrupted work period. Indeed, there is reason to believe that frequently even four hours is much too long a period, and that short pauses, or rest periods, can profitably be introduced at various points within this time.

The Noon Hour.—In addition to bringing the benefit of a shortened work period, the eight hour day has also tended to increase the doubtfully hygienic practice of the half-hour lunch period. It is true that workers are often anxious to eat quickly in order to have the working day finish as early as possible. But there are physiological factors which out of consideration for the long-time well-being of the workers, should be given weight. It is clearly impossible for the human stomach to bring the amount of food which should be taken at the noon meal to a state of sufficient digestion in thirty minutes, to make it healthful for the worker to return at once to work, for that will draw the blood supply from the stomach where it is needed to further the processes of digestion. Forty-five minutes is the shortest time which should be taken; the unhealthy tendency today to eat rapidly is sufficiently wide-spread to need no such encouragement as the half-hour lunch interval brings. Ideally, a full thirty minutes should be given to eating and thirty minutes more to quiet relaxation. And it will usually be found true that if workers have some place to go besides the shop door-step and something to do besides sit on uncomfortable benches, they will be less reluctant to give 45 or 60 minutes to the noon recess. The stomach, it should be remembered, is a vital part of the "physico-chemical engine" which can be prematurely worn out and put temporarily out of business by overwork under improper conditions. To require it to start its digestive work while the body is otherwise engaged upon physical labors, is an unnatural and too severe demand.

Decision about the actual lunch hour policy in any given plant, must be made with its local conditions in view. If, however, there are not convenient and adequate lunch rooms, or if the workers are eating in the shop with nowhere to go after

¹ See *Industrial Health and Efficiency*, *op. cit.*, p. 90.

disposing of their little packet of lunch, there is some reason in their demand to get to work again and get away.

Rest Periods.—A rest period is a regular, concerted and required pause in the work activity. The purpose of its introduction is to preserve the efficiency of the workers “through reduction of temporary fatigue and prevention of cumulative fatigue.”¹ Industry already is not without a fair amount of experience with rest periods; and they are found to be most clearly of advantage in the following types of work:

“Occupations monotonous in character or requiring prolonged and intense concentration of attention.

“Occupations enforcing either a continuous sitting or a continuous standing posture.

“Occupations involving severe physical exertion.

“Occupations exposing the workers to extreme heat or gases or other unfavorable ventilating arrangements.”²

It has frequently been true that rest periods have been introduced and continued because, as one manager puts it, it is “common sense.”

“We believe,” he added, “that it is self-evident that a few minutes in the middle of the morning and in the middle of the afternoon devoted to relaxation and to exercises, which will straighten out the cramped bones and muscles of workers have beneficial results in every way.”³

More reasoned arguments have also been advanced by employers who have studied the results of this policy closely. It is claimed, for example, that rest periods show a beneficial effect on quantity and quality of work done. Quantity may be increased because of a spurt immediately preceding or following the rest period, or because of the greater energy which it is possible to summon throughout the working period. “I consider rest periods at certain times of the day as absolutely necessary to secure a reasonable amount of human effort from the individual worker,” says one employment manager. “We find that we can do more and better work with fewer employees by this method.”⁴ “A 10-minute break in the middle of the

¹ See Rest Periods for Industrial Workers, Research Report No. 13 of the National Industrial Conference Board, Boston, 1919. We are indebted to this study for much of the matter in this section.

² Rest Periods for Industrial Workers, *op. cit.*, p. 9.

³ Rest Periods for Industrial Workers, *op. cit.*, p. 43.

⁴ Rest Periods for Industrial Workers, *op. cit.*, p. 20.

morning and afternoon spells, during which the operatives remain at their machines, but take tea or other nutriment brought them by boys or by traveling canteens, has been found a valuable aid to output in some munition plants."¹

Quality, likewise, may be improved because the worker's powers of attention, perception and manipulation are kept keen through an occasional rest.

"That a brief rest would be conducive to better work in occupations involving such concentration as proof reading or bookkeeping or close inspective seems almost self-evident."²

The length of the rest intervals and the distribution of them through the working hours, are clearly subject for experimentation. Several studies indicate that short rest periods of five minutes scattered through the day affect output most helpfully.³

"For work in which severe muscular effort is required it seems probable that the maximum output over the day's work and the best conditions for the workers' comfort and maintained health will be secured by giving short spells of strenuous activity broken by longer spells of rest, the time ratio of rest to action being here, for maximal efficiency, greater than that for the employments in which nervous activity is more prominent or more complicated than in the processes involved during familiar muscular work."⁴

On the other hand, the usual practice where work is less arduous, is a period in the middle of the morning of ten or fifteen minutes; and a similar respite in the middle of the afternoon.

Questions often arise about the use of this interval. Some plants leave the workers to themselves and it is understood that they shall use the time to get drinking water, walk around, and use the toilets. Other plants where the work is sedentary have setting-up exercises for five minutes; selected workers are trained in the setting-up drill and they lead the drill in their own departments. Windows are opened and everyone is encouraged to get the most complete possible physical change. Other plants encourage the taking of a small lunch at this time. Pro-

¹ Industrial Health and Efficiency, *op. cit.*, p. 90.

² Rest Periods for Industrial Workers, *op. cit.*, p. 25.

³ Jones, E. D. Administration of Industrial Enterprises, 1916, pp. 221-2.

⁴ Industrial Health and Efficiency, *op. cit.*, p. 37.

vided that wholesome food like milk, sweet chocolate or sandwiches, is taken, this is sound practice and should be encouraged especially in the morning interval when many workers have taken a breakfast inadequate to energize them until noon.

The important principle to apply is that the workers should be encouraged to do something in the rest period which brings a real change in position, movement and blood pressure.

The administration of rest periods is not, however, without its difficulties. Some employers object that there are types of work at which the worker can normally rest between the times when the job requires attention. Whether this is true or not is easily established by job analysis; and where it is true, the objection certainly has force. At other types of work it is claimed that the period of rest would naturally follow the completion of certain parts of the process which occurs at irregular times, and that it has necessarily to be intermittent. Where this is the case, obviously the time of rest should be accommodated to the nature of the work.

Certain objections that may arise at the installation of rest periods depend for their satisfactory handling largely upon the management's attitude and the shop morale. For example, workers may prefer to have no rest periods but a shorter working day. This is a natural position even if the day is eight hours long or less. But it is an objection that the management can usually meet with ease if it is in the habit of conferring with its workers in the manner described in the chapters on job analysis and shop committees. Again, there may be danger that at first it will take the shop a long time to "settle down" after the period is over; or that the machine or material has again to be made ready to use when the worker returns after an interruption of the process. Neither of these difficulties, however, prove impossible to meet where managers are consciously developing a sense of shop responsibility and goodwill. Under special manufacturing conditions rest periods can be dovetailed or taken by groups in rotation. There is also the piece worker's possible objection—occasioned if output and therefore earnings are even slightly reduced when rest periods are introduced. If it does in some cases prove true that the earnings of piece workers suffer a permanent reduction, this situation might be met by such alteration of the rates as will give the worker as much as he earned before.

The usual purpose in introducing rest periods is, of course, to reduce fatigue and increase output. Scientific determination of the results of work on the worker and on output require, however, intensive study of each job and scientific study of the results of fatigue. A careful introduction of rest periods involves an ability to make proper job analysis and fatigue measurements.

In conclusion we may safely say that the use of rest periods even when no positive effect on output is demonstrable, is a commendable and physiologically wise precaution at most jobs. As to the length and distribution of the periods, however, it is impossible to generalize.

Hours and Working Periods for Women Workers and Children.—Consideration for the health and integrity of the race has led to the gradual adoption of legislative restrictions upon the working hours of women and children, which do not apply to men. It is not our purpose here to recite what those restrictions are in detail or what specific regulations each state has. It is important to understand, however, that the enlightened conscience of the community has reached a stage where the following standards are regarded as essential.

There should be no night work for women, or for children (under 16 years of age); that is, work after ten in the evening or before six in the morning.

There should be no more than forty-eight hours of work per week for women and children; and less is desirable. This maximum figure should be inclusive of all overtime.

There should be no more than eight hours of work a day for women and children; and less is desirable.

There should usually be a full hour off at noon.

There should be a rest period of at least ten minutes in the middle of the morning and the afternoon.

Pregnant women should not be employed for at least eight weeks preceding and following childbirth.

For all women and girl workers, one day a month might well be allowed off with pay; the day to be taken at the worker's discretion.

Conclusion.—The conclusion to which our consideration of hours leads is that since this is a subject upon which actual practices are necessarily dictated by a combination of scientific data and human desires, *those practices will be most amicably determined and effectively put into operation if they are made the sub-*

ject of determination by managers and workers in conferences. There are maximum hours and working periods which it is clearly inexpedient to exceed. There are certain off-times which it is clearly expedient to introduce. But experiments are needed to determine the best possible relation between length and intensity of operations and high output.

Finally, employers should realize that the human demand for shortened hours challenges their managerial ability as it never has been challenged before. It gives a new reason for intensive effort also to the workers. But managers, especially, will require a firm intellectual grasp and control of all the other elements, besides the time of the workers at the bench and machine, which contribute to productivity. And once the real roots of efficiency are tapped there is good reason to believe that the working time can be safely confined within reasonable, healthful and enjoyable limits. Civilization can then begin to refute the melancholy observation of John Stuart Mill that it was doubtful whether the introduction of machinery had in any way lightened the burdens of mankind.

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CHAPTER VIII

THE HEALTH OF THE WORKER

Bodily integrity is the foundation of economic and social efficiency. It is the basis of health in mind, body and spirit. Without that integrity the wholeness and wholesomeness of the individual is impaired. With it, the groundwork is laid for individual competence and industrial efficiency. Health is thus obviously at the root of productivity and of cordial industrial relations.

"The idea is rapidly growing that of all the factors of an economic advantage, health is the most crucial. Upon this hypothesis, therefore, the conclusion may rest that the logical primary step is the establishment of a broad and effective study of health as related to laboring conditions."¹

More, however, than a study of health is now being undertaken by many firms. We are finding, usually associated with the personnel department, a health division or section in which are either nurses or doctors or both. We are finding more and more attention being given to the provision of hospital facilities adjacent to plants, to health instruction, to physical examinations, to clinics for workers. Industrial managers are on the way to a practical recognition of health as the basis of efficiency.

As a result of this new emphasis on health, the medical profession itself is developing specialists in the medical field.

"Industrial medicine," says a recent writer, "may be defined as the theory and practice of medicine applied to the purpose of preventing and alleviating sickness and injury among industrial workers in order that they may enjoy the benefits of continuous productive employment."²

Industrial health work so conceived properly covers a wide field. It includes preventive medicine; personal and social

¹ FAVILL. 13th Bien. Rep., Wisconsin Bureau of Labor, Pt. III, 1907-08, p. 485.

² SELBY, C. D. Studies of the Medical and Surgical Care of Industrial Workers. Wash., Govt. Print. Off., 1919. (*Public Health Bul.* 99, p. 5.)

hygiene; factory sanitation and safety; emergency surgery and first aid; laboratory tests and hospital care; dental prophylaxis; mental hygiene; medical follow-up; eye, ear, nose and throat specialists and clinics in special diseases. Whether or not the administration of all of these activities would properly come under the medical section of the personnel department, is a question; although the tendency is undoubtedly toward putting all a plant's work which is directly related to health under trained medical supervision. This conclusion has been reached in one plant after another as the beneficial results of preventive health work have been reflected in increased output, decreased turnover, decreased absences and better all around health.

One large corporation, although in many respects leading in enlightened industrial practice, was opposed to strict medical oversight. Its progressive employment director studied the turnover attentively and found that during the past year thirteen per cent. of the men leaving went on account of ill health or because their physical condition demanded outside work. This change in personnel directed the attention of the company to the necessity for selecting workers more carefully for the jobs they were to do. In order properly to select men it became necessary to ascertain the physical, mental and moral qualities required in every particular job. To meet this need the semi-skilled and unskilled jobs in the plant's manufacturing division were analyzed in some detail. Thus in spite of the firm's reluctance to adopt health supervision, its own records of labor turnover demonstrated that healthy workers were the most vitally necessary factor in successful production.

Nor are the benefits confined to the management's side. To the employee adequate health supervision brings the advantages of increasing his earning power by permitting him to keep himself in proper physical condition; by preventing him from injuring himself by overwork or carelessly infecting himself or his associates. Industrial medical oversight increases the understanding of the worker concerning personal and social hygiene; it shows that physical incapacity is not a dispensation of Providence, but largely the result of neglect or ignorance.

The Health Program.—Assuming then that there is trained medical leadership in the plant, what is the program which can profitably be carried out? We submit the following program:

- A. Physical examination prior to employment and periodically thereafter of all new and old employees, including follow-up of all employees:
1. Periodical physical re-examination, varying for different groups of workers and in different processes. In dangerous processes or for workers under observation and treatment this re-examination should recur quite frequently.
 2. Recommending transfer of workers for health reasons.
 3. Clinical follow-up of accepted applicants who have minor defects.
- B. Knowledge, inspection and supervision of plant working conditions:
1. Sanitation and safety of general plant working conditions to eliminate health hazards.
- C. Preventive and prophylactic health measures:
1. Immediate attention to all health defects found in physical examinations.
 2. Immediate attention to all employees incapacitated from accident or illness.
 3. Administration of first aid; dispensary; hospital.
 4. Knowledge of physical requirements of trade processes.
 5. Health education including constructive advice and instruction on personal and social hygiene, safety and sanitation.
- D. Active cooperation in health matters:
1. Between medical staff and all the rest of the plant through health committees.
 2. Between medical staff and mutual benefit society or group insurance agents.
 3. Between industrial corporations and private or public health and educational agencies.
 4. Between industries and state health insurance administrators.
- E. Health administration:
1. Staff.
 2. Qualifications of physician; nurse.
 3. Equipment; records; cost.
 4. Responsibility for health supervision

Physical Examination and Follow-up of Employees.—Modern corporations increasingly recognize the importance of definite standards of individual health as a test for employment. Medical examinations as a prerequisite to employment are being constantly extended, and beneficial results are being shown.

In one large shipbuilding plant where initial physical examination of workers was not required, the company discovered among its work force during 1918, twelve epileptics, one of whom had been re-employed three times under different names; three cases of insanity that had to be committed to the asylum at an expense of \$200; several cases of syphilis, one of which cost the company over \$400 for treatment; twenty-one cases of ruptures, a number

of whom quit work after successful operation at the plant's expense and numerous cases of other more or less serious diseases.

The need for medical examination applies both to men and women employees. Indeed, an examination by a woman physician is essential if women workers are not to be misplaced or injured. They must be watched, studied, trained and protected in all directions, not alone for their own sakes, but in the interest of their own possible offspring and of the national health.

The reasons for a physical examination should be sympathetically explained in advance to every worker. He should understand that the examination is primarily a matter of health protection and conservation; that the management wishes to offer him work for which he is physically and mentally best fitted, and at the same time to safeguard him and others from accidents and epidemics.

Organized employees have from time to time raised objections to physical examinations. But upon analysis the objection is usually found to apply less to the examinations themselves than to the abuses which might possibly arise from them.

Organized labor apprehends that facts discovered by medical examinations may be used to jeopardize the position of industrial workers; that by the use of too high standards competent people may be debarred from employment; and that firms may use the excuse of physical incompetence to exclude union sympathizers. They maintain that responsibility for preventive or curative health work should be jointly assumed by employers, workers and community. The criticism of labor on this last point has particular weight. It is certainly difficult for any one plant alone to cope with the problem of rejecting industrial workers afflicted with tuberculosis, venereal or other infectious diseases. The need is for a program of community attack through preventive and restorative clinics which will distribute the burden of rehabilitating such people for productive employment regardless of their present industrial connections.

Indeed, the president of the American Federation of Labor has endorsed medical examinations provided they are given by publicly employed physicians using health standards which have been agreed to in advance by the organized workers.

Organized labor's anxiety to see the control of health administration in non-industrial hands, arises from a genuine sense of the limitations upon company medical work. But it is nevertheless

true that much can be done to foster working class health until that day when the community itself is willing to cooperate in a thorough-going preventive program.

Physical examinations when intelligently given, and when used as an evidence of goodwill in personnel work, do not today work to exclude applicants from jobs. The effort is rather to secure the best possible adaptation of worker to job. And the rejections are few—in the best plants less than four per cent. of the otherwise successful applicants. Indeed, in the larger plants where the value of healthy workers is really understood, applicants who might properly be rejected on physical grounds, are accepted and given free medical treatment in the company's corrective clinics.

Much depends upon the spirit in which the work is undertaken. Personal medical records might, of course, be used prejudicially to the individual's immediate interests. Yet if the company's motives are known to be honorable, if its efforts at correction are known to be sincere and thorough, if its medical records are held as truly confidential, the gain from the health work is usually far greater to the large body of workers than any possible disadvantage it could bring.

A few companies have reached a point where they recognize a social responsibility for those members of the community who do not conform to their usual employment standards. They contend that each community has its residuum of handicapped individuals, and that it is the duty of employers to place these to the extent that it does not endanger the life and health of either the handicapped or their fellow-workers. And it is certainly true that with a little study useful places can be made in many factories for some who are blind, or deaf, or partially crippled, or slightly below the average mentally.

The character of the medical examination will naturally vary with the physical requirements of the position which the applicant is to fill. Yet no examination should be so superficial that it does not cover the relation of height to weight, lung conditions, teeth, head and throat, sight and hearing, possible hernia, and possible communicable diseases.

Examinations should, of course, be given by a fully qualified doctor who shows tact and patience in dealing with applicants. The emphasis of his whole outlook and effort should be in the direction of *helping employees to stay well or get well*. There will

therefore be special value in having the medical examinations followed up periodically by special examination into known disabilities.

Considering the variety of dangerous processes to which workers are exposed in many industries, the value of periodic physical re-examination after employment becomes as great as that of medical examination upon admission. Some plants, especially where disease hazards are known to be great or where food is being prepared, find it worth while to have a doctor or nurse re-examine the work force quite frequently in order to minimize dangers from occupational disease. Moreover, by comparing the physical status of its employees from time to time such companies can systematically endeavor to raise the health standard for the whole establishment and consequently the quality and quantity of output.

Dental Service.—Many companies are finding it necessary to provide a well equipped dentist's office, where examination and emergency work is generally free, and where clinical dentistry is done at a nominal charge for materials used plus the dentist's time. This prompt dental service has frequently resulted in warding off incipient rheumatism, tuberculosis, or throat epidemics. The head of a large industrial dental clinic recently reported that one dental unit working full time is needed for every 500 to 600 employees. In this clinic every patient would require from forty-five minutes to one hour for prophylactic or emergency service only, at a cost per unit of \$3 an hour.¹

Dispensary and Hospital.—It is usually justifiable for a plant to maintain sufficient hospital or dispensary facilities to minister to workers who become mildly indisposed while on the job. Many hours of work are saved to corporations and many hours' wages to workers by having beds or couches on which they may recuperate or by having doctors who can prescribe beneficial treatment. Yet it is possible to go too far in this eagerness to get workers back on the job. If employees are really indisposed recovery is usually more prompt if there is thorough regaining of strength before he or she tries to work again. Company hospitals should, indeed, be used discreetly so as not to strive for premature cures on the one hand, and not to take the place of the family physician on the other.

Large modern plants often have separate buildings or dispen-

¹ cf. SELBY, *op. cit.*, p. 37.

sary and hospital wards, even though bedridden workers are kept there only temporarily. Plants located in country districts where community provisions for medical aid do not exist, are warranted in building a dispensary or hospital. Such companies have a special responsibility for safeguarding the health of their employees.

Where no hospital facilities are furnished on the factory premises, the management should cooperate with existing district nursing and other civic agencies, or subsidize at a greatly reduced cost free medical assistance or endow beds for industrial workers in the local institutions. The retaining of a doctor on full time service or the creation of a benefit fund that hires a doctor and nurse are possible alternative expedients.

Health Records.—Adequate health records are an essential index to the physical condition of the plant and of the workers. Records of causes of absence, of accidents, sickness, occupational diseases—all are vital to a medical policy which is to be pursued intelligently. Indeed, such records can often supply the unanswerable evidence in behalf of needed changes in personnel procedure.

Health Education.—The various industrial health problems we have thus far considered will not be most effectively met until they are worked at in conjunction with a definitely educational campaign. Even well educated workers are likely to be seriously lacking in knowledge about the ordinary requirements of personal hygiene. Constant, sympathetic group and individual education in matters of hygiene and medical care will help enormously to build up the permanent vitality of all the workers.

Health Talks.—Educational health activity may include brief group talks on matters of constructive health. These talks may be illustrated by simple charts or diagrams or chemical experiments. They usually consider such topics as personal cleanliness; sex knowledge; proper air and clothing; food; stimulants; sleep; exercise; home sanitation and emergency care. Talks are sometimes given on the personnel service activities which exist to maintain the health of employees; on dental care; on lunch room, rest and recreation facilities; methods of fatigue reduction; occupational poisons; factory sanitation and industrial insurance.

A large Western company made periodic use of these talks as a means of training its employees in health matters. This company arranged courses of one hour lectures given to groups of

from twenty-five to thirty-five people, selected so that factory production was not affected. Forty-five minutes of the time were on "company time." The remaining fifteen minutes employees were asked to give from their noon hour. The company distributed schedules of the proposed talks, established a question box and gave employees an opportunity to consult the factory physician personally after the lecture in his office. The course proved so popular that the work force asked to have it repeated before the employee group attending the summer conferences and training schools of the parent company.

Occupational Diseases.—In many plants there is need for aggressive research work by the medical staff. Especially where there are problems of occupational disease hazard, careful follow-up of cases, study of processes to devise less harmful methods or materials, reporting of cases to state boards of health are all aids in a campaign to make industrial processes safe for the human organism.

The fact that much of the work entailed in fundamental research into prevention measures is expensive, is not an argument for its indefinite postponement; but rather for getting it carried on under the right auspices. This is a field in which trade associations, medical schools and labor unions can profitably cooperate and minimize what would otherwise be a disproportionately large expense for many individual firms.

Fatigue Study.—Determination of the extent of excessive fatigue is a second research function. For while it may be comparatively easy to get testimony that workers "feel tired," evidence which is scientifically conclusive of a serious lessening of efficiency is secured only by the most exacting study.

Fatigue, as authoritatively defined, is a diminution of working capacity due to length or intensity of previous activity. And it is evidence disclosing the extent of diminished working capacity which is therefore needed. Such evidence, it should be said at once, is not easy to obtain in the ordinary plant. For it presupposes the existence of full production, accident and sickness records, a steady flow of practically identical work under similar working conditions for a long enough period to admit of comparison from one month to another, and done by enough of the same people to afford an adequate basis of comparison from one worker to another; and it is helpful if there can be some comparison of output under two different hourly schedules—as for example

a 54 and a 48 hour week.¹ In a word, a statistically convincing study of fatigue presupposes a correlation of the variable factors, which it is exceedingly difficult to get in industry with the usual changes in orders, seasons and workers.

Nevertheless the practical utility of such study has been demonstrated in plants which have found it more economical to have workers divide the day between two different types of work, which have introduced rest periods and which have adopted the eight hour day.

Fatigue will appear, of course, after continued application at labors which are thoroughly enjoyable; it is not therefore a psychological so much as a physiological problem. It is less a question of how people feel than of how they act. And even in their actions the diminished working capacity may not be cause for alarm until that point is reached where complete recovery of vigor and health is not possible between one working period and the next. But where workers are chronically tired out and no full recuperation takes place, the situation is progressively dangerous; for the lowered working capacity may come to be considered the "normal" working capacity, and a process of slow devitalization is then likely to take place. Or, if the effects of fatigue begin to be consciously recognized by the workers, they try to adjust themselves to the long hours or arduous toil by slowing down the working pace and resting at frequent intervals.

Methods for the discovery of a serious degree of fatigue include a close study of comparative output records in which each hour's output is disclosed, records of accident frequency and causes, of sickness frequency and causes, statements of power consumption per hour, of spoiled work, and in some cases of labor turnover.

Reduction of excessive fatigue may require a reduction in working hours, but not necessarily. The case for the shorter work day (below eight or nine hours) has other equally strong, if not stronger, reasons to be urged for it than the reduction of fatigue, since it may be difficult at work done for that number of hours to show that any serious diminution of working capacity has taken place. The elimination of fatigue is rather to be found in corrective efforts upon all the critically modifying

¹ For a thorough statement of methods of utilizing factory statistics to detect fatigue see FLORENCE, P. S. Use of Factory Statistics in the Investigation of Industrial Fatigue.

factors—working conditions, the work content and incentive, types of machinery used, its speed of operation and other items.

The subordination in this volume of fatigue study as merely one item in the problem of health maintenance and more especially to what we shall subsequently discuss as job study or analysis, is not due to any failure to appreciate the importance of reducing fatigue. It is due rather to a conviction that in practice all the contributing causes are of such determining importance that the study of the job—job analysis—seems to us to be of the greatest service in helping managements to preserve a proper perspective in any corrective or preventive work; and when the job analysis is adopted it naturally means the adoption of measures which almost inevitably reduce fatigue.

A final suggestion is important. Fatigue is, after all, a resultant which shows in individuals. Any widely applied regulation of hours “rests upon a physiological basis devised for the average.” But cases will inevitably come to the attention of the personnel department where individual workers have “gone stale” or are “used up” even under a reasonable schedule of working hours. “A single day off,” suggests an English study, “given occasionally at the right time, would have avoided much wasteful reduction of capacity and in the worst cases the total loss of many days’ work.” Although written of the strenuous war-time working hours, the warning is a useful one for normal times. “If once in every two or three months,” says one workman, “a man could have two or three days off it would prove the finest medicine.”¹

Fatigue study thus is a task not alone of finding a general level of factory working hours which is healthful; but of adapting the length of each individual’s daily stay at one job to his capacities, and of being on the watch for individuals who may be temporarily unable to stand the normal pace.

Lunch Rooms.—Lunch rooms are often an important health asset. The human machine is in the first instance a “physico-chemical engine.” To keep energy at the full, man requires sufficient and proper nourishment. Food is a stimulant as well as an energy producer; and the medical section can often advise usefully about food values and healthful lunches.

The custom of having a small lunch at 9.30 or 10 A.M., has much to commend it from a physiological point of view. In some plants lunches brought from home by employees are supplemented by

¹ Industrial Health and Efficiency, *op. cit.*, p. 42 and p. 91.

soup, milk or other drinks, sandwiches or pie, distributed from small travelling carts at a moderate price. Other plants have regular lunch rooms or cafeterias where a lunch is served at a small charge.

Factory lunch rooms may usefully meet the needs of an inconvenient local situation. In factories, for example, located outside city limits and away from good restaurants, they can furnish hot, wholesome refreshments and a few small luxuries at a reasonable price.

Where a regular restaurant or lunch room is operated, the company rarely covers all expenses, although many plants meet all direct expenses from income. Almost all employers, however, testify that their lunch rooms are a good investment, because employees are better nourished and in better health than otherwise. And even where local conditions are such as to warrant no provision of a lunch room, it is good economy to provide a clean, comfortable and quiet place in which workers can warm up and eat lunches brought from home.

Health Committees.—The effectiveness of industrial health work depends upon getting the confidence and cooperation of the rank and file. To *Safety First* must be added the *Health First* slogan. Just as thorough industrial safety is brought about by the combined efforts of management and men, so best results in health work will be accomplished only if all the plant groups cooperate with public and national health agencies.

In the chapter on safety we have advocated a committee procedure with regard to plant safety as specially helpful in centering attention in accident reduction. In the same way the maintenance of a plant's health work is better assured by the cooperation of employee committees.

Health committees may well be appointed or elected to study and report on special health problems peculiar to the plant or industry, on home hygiene, on health insurance, on public health measures. The committee may even help in formulating and securing cooperation in carrying out plans for maintaining the health of employees once a reasonable standard of physical fitness has been secured; in studying attendance records; in deciding on health standards for employees at different jobs.

Because of their fundamentally educational functions, these committees may well be periodically rotated in order to give as many employees as possible the opportunity to inspect, in-

investigate and make recommendations regarding the plant's health program.

Cooperation between the Medical Section and Outside Agencies.—There is an obvious relation between good industrial management and the condition of the local sewage system, local water and milk supply, the local health department in its control of communicable diseases and its inspection of unsanitary dwellings and stores. So direct may this relation become that it is essential for the staff medical section to know local provisions and cooperate wherever possible in maintaining or obtaining wholesome conditions. How much can be done toward raising the general health average through intelligent cooperation between industry and local health and school departments is illustrated by the recently published Committee Report of the Framingham (Mass.) Community Health and Tuberculosis Demonstration. The efforts of this health crusade resulted in a drop in the tuberculosis death rate from "93 per 100,000 in 1917 to a rate corresponding to 76 for the first five months of 1919."

Efforts at health conservation are of course not confined to local agencies. There are today actively engaged in various types of health educational work, the National Association for the Study and Prevention of Tuberculosis, the State Boards of Health, the American Medical Association, the American Social Hygiene Association, the National Committee for Mental Hygiene, the Life Extension Institute, and the American Association for Labor Legislation.

There is also being developed a department of industrial hygiene in the Harvard Medical School, the purpose of which is to train doctors in the special branches of medicine and industrial relations needed for industrial physicians.

Quite the most significant tendency in industrial health work, however, is the growing movement for state health insurance. This insurance would require weekly contributions from employers, employees and the state in return for which medical attendance is given free and cash benefits of a certain per cent. of wages are furnished for a specified number of weeks in each year. Such a system would, of course, reach all workers and to the extent that it encouraged programs of prevention be an immensely helpful influence for good health. Since the average worker appears to lose at least ten days a year through sickness, there is opportunity to reduce this amount by preventive meas-

ures, and to institute curative steps on a scale that would save in the aggregate thousands of days to the workers and to industry.

Cooperative Medical Service.—The problem of providing medical service of the proper quality arises in many plants which could not use the full time of a doctor or nurse, or believe that they cannot afford to hire them. It has been found practical and successful in some cases to have a number of adjoining plants cooperate in the employing of a doctor or nurse and in the provision of hospital and first aid facilities. This greatly reduces the cost, makes possible the procuring of a thoroughly trained staff, and assures first-class treatment for workers in all the cooperating companies. In a few communities the employment managers' association has been instrumental in getting the smaller plants in the association to cooperate in providing health facilities, which include physician, nurse and hospital.

A notable instance of effective medical cooperation is the Joint Board of Sanitary Control of the Cloak and Suit Industry of New York City, employing over 85,000 people. This board is a part of the machinery created under the collective bargaining of the industry, and its work is to supervise all the factory sanitary and health conditions. It has been instrumental in gradually raising the level of physical working standards throughout the industry, and its work is now extending to the organization of health committees of workers in the individual shops.

Such joint machinery is highly desirable in industries where the extent of organization on both sides makes it practical and effective. But where the workers are not strongly organized, it is necessary always to guard against the danger of health work becoming paternalistic or inquisitorial.

One way of handling this delicate problem so as to avoid this danger is to have the company cooperate in the support of community district nurses who work as community agents and have no direct relation with the company. This tends to remove in a wholesome way the natural suspicion of workers that their affairs are being unduly pried into. The need for home nursing work is usually substantial and the benefits of it so great, that it would be unfortunate to lose its major values through suspicion of its purposes.

It is, indeed, a safe general principle that wherever a municipality or state is willing to administer or assume a major responsibility in administering any of the health work of a com-

munity, managers should encourage this in preference to building up elaborate provisions of their own.

Administration of Health Work.—Industrial medical service has not been standardized, and it is difficult to tell how much of a physician's time the care of employees requires, or how large a medical organization a given company should maintain.

Existing medical staffs vary considerably in size and required expenses. Some large and geographically isolated companies employ doctors on whole time and give them hospitals, dispensaries, nurses and clerical assistants. Smaller concerns in city localities usually require a doctor's services for part time only; and employ a nurse or other medical attendant for the daily routine work. In many plants a doctor is on call only for surgical cases or accidents.

The Industrial Physician.—The attitude of the factory physician toward the work people should be that of a friend who treats them with respect, and sees their troubles as far as possible from their point of view. To be effective, his services should be rendered in a courteous, cheerful, and sympathetic spirit. He cannot hope to win the confidence and willing cooperation of the work force without extraordinary patience, good temper and professional tact. But once that confidence is established, the doctor can help in untold ways to straighten out all sorts of individual difficulties which would otherwise create unhappiness and destroy effective workmanship.

The Industrial Nurse.—The industrial nurse whose work requires more than first aid treatments should be well trained in social work, district nursing and visiting housekeeping. In many problems of sanitation and first aid, dietetics and infant welfare, moral, domestic, and industrial troubles, her counsel will be freely and usefully sought if she proves to be a person who invites confidence. Workers are quick to respond to a feeling of genuine personal interest, especially where serious personal problems have arisen. Through daily factory trips and even occasional home visits she can keep in touch with all ill and absent workers; and in some plants it is her duty to investigate all cases of absence and tardiness. She needs tact and patience in going about among the employees' families, and in trying to coordinate plant health work with that of local health agencies.

The duties of the industrial nurse depend usually upon the size of the plant. In some cases her labors are confined to dispensary

work and care of plant accidents and illnesses. Sometimes she gives instruction in industrial hygiene and sanitation. In other cases she works especially in the families of foreign employees on prenatal care, dietetics and house sanitation.

As a rule the nurse is also responsible for complete and accurate records of accident, sickness and occupational disease.

Equipment and Cost.—Generally speaking, the equipment of medical departments depends on the interest shown in industrial medical service in the various companies and the volume and variety of work done by the industrial physician and his staff. Under these circumstances it is practically impossible to make any statements as to a reasonable cost for industrial medical service. Most employers agree, however, that in spite of considerable initial expense, expert industrial medical service is a source of economy. "It prevents litigation and keeps men on the job."

Responsibility for Medical Service.—Industrial medical departments and company physicians where no personnel departments exist, are responsible to various company officials. In many industries medical departments have been a personal interest of some company executive rather than a part of a logical plan of rounded personnel work; and hence they seem to bear little relation to the rest of the industrial relations work.

The purpose which industrial medical service primarily serves should, however, determine its relation to the other company functions. If the medical department is working primarily to reduce compensation claims, it would naturally be affiliated to the legal department. If the object of the medical service is to stabilize the labor forces through initial physical examinations, it should work in close association with the employment department.

But if the activities of the industrial medical service include, as they should, the administration of all the necessary health activities of the plant, they should be performed under the personnel department's supervision. Only in this relationship will the health services be developed in proper relation to other personnel activities, be guided by the right point of view and therefore be of maximum value to management and men.

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CHAPTER IX

A SAFETY PROGRAM

The spread of workmen's compensation insurance and the obviously disruptive effect of serious accidents on shop morale have together contributed to the wide adoption of factory safety programs. There is today little objection, at least in theory, to the whole safety-first movement. The difficulty is rather in assuring that plants are systematically and persistently hammering away at the several aspects of a preventive plan. The problem is now one of method rather than of intention. The urgent question is: What are the items in a procedure which will keep accidents at a minimum?

Causes of Accidents.—Accurate answer to this question is impossible until the causes of accidents are fully understood. For the causes are of three kinds; and they require three fairly distinct lines of procedure. Accidents may be due to mechanical, physiological or psychological causes.

The mechanical deficiencies are obviously to a large extent remediable. Unguarded machinery, dangerous elevators, slippery floors, obstructed passageways, overspeeded fly wheels and all the other familiar causes for which the worker is not in any way to blame, have their cure readily at hand for the plant which will apply it.

The physiological causes underlying accidents are due to long hours of work, an unhealthy working environment, inadequate lighting or ventilation, tasks that are monotonous or arduous. The manner in which a worker handles himself or performs his duties is profoundly influenced by his bodily condition. A man who suffers from overstrain and worry, or from excessive fatigue, is not a safe person in the neighborhood of any accident hazard.

The psychological causes of accidents are ignorance, inexperience, carelessness, recklessness, lack of plant discipline and supervision.

To cope with these causes is not the responsibility of one group alone; it must be the responsibility of all groups in the plant. For perfect as the mechanical preventive devices may be, they

can never be a substitute for personal caution and good sense. There are, indeed, certain duties which managers, foremen and workers must severally recognize.

Management's Responsibility.—The management must begin by making structural and mechanical conditions safe. This involves a program of technical study and mechanical installation; a program of education of superintendents, foremen and workers; and, in order to carry out these two with consecutive and expert attention, the creation of a safety division in the personnel department. To this division should be given full responsibility for plant safety and for the preventive work in all directions.

But perhaps the most important responsibility of the management is to give evidence of its sincerity in urging safety-first. For workers who are cautioned to be careful in one breath and who are rushed, speeded up and made to feel driven throughout the day in the next, realize that the management's protestations do not square with its actual policy. Workers on piece-rate operations are not impressed with the management's regard for safety if the regulations about safety devices cut down wages. Indeed, managers should realize that this is not the point at which the costs of safety-first work can best be met. Arrangements under which careful adherence to rules has the indirect effect of reducing a worker's wages will certainly never become popular in the shop.

Foremen's Responsibility.—The actual effectiveness of a safety program depends in large part upon the foremen's willingness to follow it out in the right spirit. As the agent of the management the foremen, in constant touch with the men actually on the job, can be the determining factor in instilling the safety-first spirit. It is often his duty to instruct new workers in the use of safety devices and acquaint them with safety regulations. He should point out trade hazards and caution the men against carelessness, disorder or exposure to danger. New employees are six times as liable to accidents as experienced men. Yet old employees transferred to new work should also be taught how to avoid injury and do their particular work in the safe way. The foreman's quiet suggestion will usually prove more helpful than disciplinary measures, and a kindly demonstration of right methods tends to leave a better impression on the worker than a "bawling out."

The safety engineer can, therefore, profitably devote considerable personal attention to persuading foremen of the importance of attention to safety and to discussing methods with them. To recognize in some public way the foreman in whose department there are the fewest accidents, is sometimes useful. To have a foremen's committee on accidents and their causes is another helpful method.

Workers' Responsibility.—Just as the management's attitude toward safety determines the foremen's, the foremen's attitude in turn determines that of the manual workers. Especially has the foreman to meet a peculiar sort of callousness and bravado in his men, which makes them take chances that are foolish and dangerous. It is frequently hard to rid a group of workers of the idea that they are "mollycoddling" themselves if they give proper concern to safe methods. Every graphic device is usually needed to dramatize the effects of carelessness on one's self and on one's family—to make workers count the costs of foolhardiness in advance.

The workers' responsibility for accident prevention is in the direction of appreciating the significance of accidents to his fellows and to himself. It is his responsibility to keep alert, to obey the safety rules, to be a committee of one on accident prevention.

Preventive Measures.—Among manual workers the work of accident prevention involves a continuous effort in a great variety of ways to drive home the safety habit. To extend the safety idea instruction should be given in simple, non-technical terms, with illustrations wherever possible. Every workman should carry the safety rule book for his information and perhaps even be occasionally examined upon his knowledge of the specific rules used in his department. Where the foreman supervises non-English speaking laborers, an interpreter should be used to assure their understanding of the hazards and necessary precautions. The simplest safety instructions should be repeated over and over again even after they are fully understood.

Suggestions from Employees.—Workers' interest in being careful is frequently stimulated by inviting their suggestions for prevention. Employees may usually be asked to help correct physical plant defects or eliminate dangerous practices. For this purpose suggestion boxes with pads and pencils conveniently attached are sometimes placed throughout the factory. The

North Western Railroad received in the first three years of its safety work 6,000 suggestions from its workmen, and all but 200 were accepted and carried out. Many corporations award monthly prizes for the best suggestions to prevent accidents; and explain reasons for rejection to an unsuccessful suggestor in order to retain his cooperation in safety work.

Safety Publicity.—Advertise safety! The works paper, the local press, the pay envelope may all be used as means of safety publicity. Cartoons or brief notices in simple language are best for this purpose. Insert cards bearing safety slogans may be slipped into the pay envelopes or placed in the time card racks. In establishments employing large numbers of workers advertising is a fruitful method of planting seeds of caution to make men think and act safety.

Bulletin boards located in conspicuous places, or where workers congregate at lunch time, are among the most effective means of continuing safety interest. The boards must be attractively gotten up and kept "alive" by a frequent change of bulletins, illustrating graphically accidents due to the absence of safeguards and those caused by the workman's lack of care. Materials include pictures of injured men, cartoons, departmental accident records, brief notices of serious accidents or measures designed for promoting health and safety in the industry. The proper use of bulletin boards everlastingly reminds the worker what he can do for his own protection.

Safety Rallies.—Another permanent educational method in accident prevention is the safety rally for employees and their families. Here the doctrine of safety is preached in short lectures on safety in various trades; habits of caution in workmen; occupational disease and its consequences; the value of safety and allied activities as an investment and detail of efficient organization. Stereopticon views are shown on safety devices in actual use at the shop; first aid exhibits; "the reason why," or the right and wrong way of doing a job; "be careful first," illustrating accident prevention work. Moving pictures are given on the "high cost of hurry," dangers of the street in stealing rides, crossing in front of or boarding moving cars, demonstrating the unsafe practices daily followed by railroad men.

Importance of Personal Hygiene.—Accident reports show that many serious and painful accidents come from infection through neglecting scratches or other slight injuries. These are

apt to develop blood poisoning, which brings on complications making recovery difficult if not impossible; and the result is often the loss of the injured member. Employees should understand why minor injuries should receive immediate treatment at the factory. They should realize the seriousness of infection, and appreciate the value of personal hygiene. To lead a clean life, have clean hands when eating, wear clean clothes, keep clean and exercise personal caution are vital aids in a program of accident prevention.

Personal Contacts.—Safety films are sometimes accompanied by a brief talk given by one of the plant executives. Personal contacts between management and men are often helpful in convincing employees that safety is a vital proposition. At the National Tube Company's McKeesport factory the general manager closes some one department each month at twenty minutes to twelve, in order to tell the men in a personal talk what they have suffered from accidents during that month, how much they have lost in wages, what the company is willing to do, and finally to ask their cooperation in accident prevention. This personal effort of the head executive has put new life and interest in the company's safety movement.

Team work counts here as elsewhere. Accidents will usually decrease when every one does his part. It is to the mutual interest of the company and the rank and file to work harmoniously in matters of safety. What then is a good plan of shop safety organization?

Shop Safety Organization.—It is absolutely necessary that safety work should be given the same dignified position in a plant as any other distinct personnel activity. To this end it should be given status as an administrative division of the personnel department under the leadership of a trained safety engineer. Operating officials of large concerns are usually too busy to keep stimulating fresh safety enthusiasm. Their human relations with the work force are not as close as can be those of the various executives of the personnel department. The director, the safety engineer and the plant doctor with their assistants can, therefore, better develop new ideas in accident prevention and apply or direct them. Such a delegation of safety work should not, however, absolve other executives from interest in this problem. It is usually found useful from many

points of view to have a variety of committees working at safety from different angles.

The safety engineer should attend or follow up all committee meetings, plan the details of the work, receive reports, recommendations, suggestions, and keep all necessary records. He also works in close relations with the chief engineer of the plant, or the department of mechanical maintenance, in devising and installing preventive guards of all sorts. His personal contact with foremen and workmen cannot be too closely developed, for only as he stands in intimate relation to these people does he get their best cooperation.

Executives' Committee.—A central safety committee composed of executives, the manager or his assistant acting as chairman, the safety engineer as secretary, has in some plants general supervision over all safety work. It gathers information, establishes standards, formulates rules, considers reports and outlines all educational activities. From the reports received by this committee is measured the burden of accidents to the individual injured and to the business.

This central committee delegates some of its duties to the departmental safety committee in charge of the foreman. It gives the foreman an active part by placing responsibility for safety and the enforcement of safety rules on him. The foreman's constant investigation of all accidents or injuries occurring among his men form the basis of the monthly written accident report requested of him by this committee. It discusses with him recent accident experience and exchanges suggestions in regard to remedying conditions or reaching the worker. These meetings between central and departmental committees do much to line up foremen, keep them interested and enthusiastic in upholding the company's safety campaign.

Workmen's Committee.—A most important feature of organized safety work is the workmen's safety committee, composed of several workers appointed by the foreman or elected by their fellows and rotating periodically in membership to allow each worker a turn. Workers who serve on a safety committee come naturally to feel that they are responsible for preventive measures and they thus become vitally interested.

Each department should have its own committee making regular shop inspections on company time, and examining into causes of accidents. These committees should give a written

report to the foreman of their findings, with recommendations for eliminating plant hazards or improving dangerous methods. A worker serving on this committee learns—what no one can make him believe—that most accidents must and can be prevented by active, willing cooperation on the part of employees. His committee experience in investigating causes of departmental accidents makes of him a missionary for safety, and thus helps to educate fellow workers in a precautionary attitude.

The administration of safety work in close cooperation with foremen's and workers' groups has a value over and above that of reducing accidents. Safety is a common interest of all groups in industry; and common efforts in its maintenance lead to common efforts in other directions—lead to a habit of joint action which can usefully be extended to other fields. The president of a large paper mill company said not long ago: "I would consider every dollar we have put into this safety work well spent even if it had not saved a life or prevented an accident, because of the get-together feeling the movement has engendered in the plant."

Conclusion.—The best guarantee of safety in the plant is a body of careful and alert workers. Carefulness and alertness are thus intangible assets which are of great value not alone in reducing accidents but in effecting economies in other ways. Like other assets they can be held only at a price. The price is absence of drive and fatigue, a policy throughout the works which sets life above dollars, an educational campaign which translates this policy into a demand for good quality product made under wholesome conditions and by workers who feel themselves fairly treated.

A safety program which is to be successful cannot, in short, be separated from the personnel program as a whole. Until it is dominated by a human point of view and directed by one who understands and values men as human beings, such a program is in danger of being perfunctory and sporadic.

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CHAPTER X

STANDARD OF PHYSICAL WORKING CONDITIONS

The importance of safe, wholesome and attractive workshops is today widely recognized. There can be neither maximum efficiency, mutual goodwill nor genuine self-respect in the working force if working conditions are dangerous, disagreeable or unhealthy. It is to everyone's interest that the work environment conform to what are now well established scientific standards. Other things being equal, the factory with the best conditions gets the best class of employees, holds them longer and turns out a better grade of product.

It is, therefore, our purpose to set forth here from the point of view of the administrator of personnel work, the items which should be considered in providing, inspecting and improving working conditions, and to indicate what seems to be reasonable standard practice in connection with each. The chapter will thus serve a double purpose. It becomes in effect a check-list of the most important items in physical working conditions; and it is a statement of standards.

One or two words of explanation are first necessary. We are distinctly not posing as technical experts in the several fields covered in this chapter. We do, however, desire to present what we believe every competent employment administrator should have—an approximately accurate statement of the best expert conclusions on matters of working conditions, and a guide to further sources of information and technical counsel. It would, for example, be fatal for the administrator of personnel work to attempt to design or install an exhaust system; but the administrator who is "on his job" will be able to have an opinion as to whether a proposed system will meet his plant's needs satisfactorily. The mechanical engineer and the lighting, heating or ventilating consultant are not infallible. Too many cases of grievous error in judgment and execution have come to our notice in factories for us to advise that the expert should be always

on top. He should be on tap; and his conclusions, like those of specialists in other fields, should be scrutinized by the more general executives who have common sense, who know the workers' point of view, who combine some technical knowledge with a knowledge of the rest of the factory's problem.

When in doubt call in the expert, is a good rule in matters of working conditions; and another is: Know all you can yourself about the problem on which you seek advice.

Again, we are assuming here that the administration of physical working conditions is assigned to the personnel department. Matters relating to plant housekeeping are so clearly related to the workers' attitude that no other department promises to function here so faithfully. Logically the attitude of mind in which working conditions will be looked after most satisfactorily is that which the personnel executive has. Once the responsibility for administering working conditions is undertaken by the personnel department, the next job is to determine the items to be included.

It may be objected, however, that on many of the matters here considered there are laws or governmental regulations which render any concern about them, except by the official factory inspector, superfluous. This attitude wholly ignores several patent facts: First, that the legal standards are often vague, are far from uniform and are minimum standards only; second, that factory inspection is by no means adequate in many states; and third, that the basis for determination of sound procedure in personnel relations is not, and never can be, completely embodied in law. The answer to the objection is, therefore, that while legal standards furnish an index to some widely accepted standards, they seldom comprise what any competent manager would regard as satisfactory standard practice.

In concluding this introduction we are anxious to meet the further possible objection that standard conditions are all very well if one can build an entirely new plant, but that under existing conditions little can be done. There are two aspects to this very real difficulty which should be noted; first, as to the older factories; second, as to expense. It is unquestionably true that the new plant has a great advantage. It is even true—and we speak from experience in over a score of industries—that working conditions in what have been regarded as the most disagreeable and offensive industries *can with new construction be made prac-*

tically unobjectionable if thought and pains are expended. There is in the newer factories today no inherent reason why the workplace should be ugly, repellent or unwholesome. If only we can get that idea fixed in managers' minds, we can make rapid strides toward correction of the defects which remain.

But this does not meet the conditions of the old fashioned factories. Concerning them, it is our observation that the most serious difficulty is that managers do not try to use to best advantage the equipment which they have. They seem to forget what wonders can be performed by the constant application of soap and water and paint and broom; there is often less a crying need for new facilities than a need for the clean and orderly maintenance of those which exist.

Yet this is not always true. There are cases where over a period of twenty-five years it will prove cheaper in dollars and cents to rebuild from the ground up *at once*, than to tinker here and there, and never have a thoroughly desirable work place to show for the trouble. There are some corporations in which this procrastination has become a habit. They ward off every suggestion of improvement by pointing out that "in the new plant all will be different." The employment administrator has the real duty under such conditions of precipitating action. It was never truer than it is today that a modern factory building pays not simply from the process point of view but also from that of personnel.

Not a little of the seeming hardship in installing new equipment in an old building lies in the fact that the cost is considered as a current expense rather than as part of the investment. This may be an error of attitude or of bookkeeping; and it is thus always useful to remind the hesitating executive that the cost of an outlay of \$10,000 on permanent improvements should show on his annual statement as the cost of the interest charge on that amount.

Arguing from statistics of labor turnover is never safe; but suppose, for illustration, that the employment administrator finds that the turnover, demonstrably traceable to bad factory conditions, is costing the company \$3,000 a year. He can in such a case legitimately use the argument that if that \$3,000, instead of being frittered away in turnover were used to pay interest on an investment in improved conditions, betterments worth \$60,000 could be adopted; the turnover would decrease; and all the other

benefits of good conditions would accrue immediately and permanently. In other words, the immediate out-of-pocket expense is not the only consideration. We have to bear in mind that in sound business thinking today *working conditions which are right are an essential part of the initial investment.*

Fire.—Inspection of the entire physical equipment in order to assure adequate protection to the property against loss by fire is usually taken in hand by the insurance companies; and in some cases also by local and state authorities. What concerns the employment administrator, therefore, is the risk to *life* that may exist. The two, of course, cannot and need not always be sharply separated; it is simply that the point of view of the conservation of *human* values is constantly emphasized in the work of this department.

Of prime importance is the question of *exits*. These should be of fire-proof material, whether within or outside the factory building. Failing that, they should be contained in a fireproof tower. Where more than ten workers are employed on a floor there should be at least two exits, located at opposite ends of the room; and no exit should be more than 150 feet from the farthest work point in buildings protected by sprinklers, or 100 feet in buildings not so protected. The treads should be at least ten inches wide with a rise of not more than seven and three-quarters inches to a step.¹ The width of the stairway should depend upon the number of people who must use it, but it should never be less than forty-four inches. There should be hand rails on both sides. It is important to be sure that exits do not debouch into blind alleys, or locked basements, or other places where people might be trapped and smothered. They should lead either to the street or to a fireproof passageway leading to the street, such passageway to have a width not less than the aggregate width of the stairways leading to it.

Exit doors should, of course, open outward; should be unlocked during working hours; and be equipped with the type of latch used in theater exits in which there is a metal rod across the entire door at the height of the waist, which is attached to the latch and which when pushed down releases the latch. Aisles to exits should be at least four feet wide and should at all times be unob-

¹ NEW YORK STATE INDUSTRIAL COMMISSION. Industrial Code, with Amendments, Additions and Annotations to Aug. 1, 1918. Albany, N. Y., pub. by Com., 1918.

structed by trucks or materials.¹ Exits should be clearly marked by signs in languages familiar to the occupants of the room by day, and by red electric lights by night. These signs should always be kept clean and bright.

Monthly fire drills are frequently required by law; and if they are not, they should be adopted as standard practice. There should be fire alarm bells which will give all workers the fire signal; and upon hearing it they should (according to previous instructions) proceed to the assigned exits. If the drill is held during working time, it is essential that piece workers be paid for the time lost; and it is assumed that week workers will be. There should be every inducement for the faithful carrying-out of a complete evacuation of the building at these monthly drills. The location of the fire box and the emergency fire apparatus in each room or department should be known to all, as well as the methods of utilizing them. Especially where the nature of the process or material makes a sudden conflagration likely, there should be sufficient hand extinguishers, pails of sand or other effective means at hand which the workers know how to use. Maximum protection is only attained where a plant fire department is trained efficiently in the use of the apparatus, and where the interest of all in reducing the fire hazards has been aroused.

Valuable preventive work can be done by providing adequate *fireproof containers* for waste, scrap and rubbish, and by seeing to it that these are emptied and the contents safely disposed of at regular intervals. Special problems arise in the handling of combustibles and explosives, which are usually covered by the regulations of the underwriters.

In summary, we emphasize here what is true of every item of working conditions: *Some one executive should be assigned to the task of overseeing the work of fire prevention and reduction of hazards to life and property.* Then and only then will these matters receive the constant and systematic attention they deserve. *The allocation of responsibility with authority is the beginning of effective executive action.*

Accident.—In the previous chapter we have dwelt upon a safety-first program and in that connection have mentioned many of the points which must be considered in a survey of plant con-

¹ For careful study of aisles, especially in relation to crowding, see PETER SPENCE, M. E., in *The Bulletin of the New York State Industrial Commission*, v. 4, pp. 68-9, Jan., 1919.

ditions which looks to the establishment of standard conditions of safety. There must, of course, be proper safety organization, executive and educational, throughout the plant.

But we are here concerned with those physical conditions and hazards to which special attention must be paid if the plant itself is to be as safe as possible. We shall therefore consider briefly the familiar hazards.

Elevators and elevator equipment require special attention. Elevators should operate in fireproof shafts, protected by spring bumpers at top and bottom. The car should be enclosed on all sides and on top by strong steel grilling and should carry an automatic locking device to be used when the car is being loaded, or when the operator leaves the car. The gates to the shaft should cover the entire opening at each floor, preferably with a fireproof door which can be unlocked from the outside only.

Belting, especially high-speed, overhead transmission belting, should be equipped with shifting devices having automatic locks so that belts cannot work back on to the wheels and start the machinery. The safest method of fastening belting together is to glue the joints; the most dangerous is to use steel fasteners. It is important that there be either a direct method of stopping belting in each room or direct communication to the engine room so that power can be at once turned off if an accident has occurred.

Machines or wheels revolving at a rapid rate should, especially if there are projections from their surface, be enclosed in a stationary guard. Exposed gears, sprockets and chains should usually be covered with steel wire mesh or solid steel casing. Circular saws, emery and all types of abrasive wheels should be enclosed just as fully as the proper execution of the work allows. Calendering operations of all sorts require guards to prevent hands and clothing from being caught in the revolving rolls. On all such machines the guards should be painted a conspicuous color; they should be strong enough to hold under the severest conditions; they should be removable, but usually only by the machinist who repairs the machinery.

Punch and drill presses of all sorts and hydraulic cutting machines are a grave source of danger unless so arranged that the worker *must* remove both hands from the danger zone before the machine operates.

Floors are a hazard if they are splintery, slippery or uneven.

Floors wet with oil or water can be made safe by proper covering of rubber matting, wooden gratings, and by proper drainage. Obstacles on the floor such as tools, materials, upturned nails, etc., over which the worker may fall are usually the result of careless housekeeping, and are avoidable. Truck handles which project into aisles are a fruitful if minor cause of injury, which can be remedied by attaching a steel spring holder to the truck itself, in which the handle can be held securely upright out of everybody's way.

The gauging of the speed of fly wheels and exhaust fans of all sorts is important in the light of the number of explosions of such wheels which have been due to their running at higher than prescribed speed. The normal revolutions per minute should be clearly posted beside each wheel and a reading of the speed gauge will then make comparison and regulation an easy matter.

Ladders should be used with great care. The only safe equipment is specially designed bases for the feet of the ladder, which, depending on the material of the floor, should have either steel pointed feet, inverted hollow rubber bases, or some other non-slip device.¹

Other details which require constant watchfulness include the protection of workers in the factory yard from moving freight cars, dangers incident to oiling machinery in motion, dangers of electric shock at switch boards, special hazards to the eye, hazards of open pits and vats, of travelling cranes and falling objects, of hot pipes and boilers located too nearly under the work places. And finally it must be remembered that in addition each industry has its own special hazards.

The following general rules of standard practice can be safely laid down:

Make factory equipment as "fool-proof" as possible. Accidents occur not when men are alert against a hazard "that any man in his senses simply could not get hurt from," as managers so often put it. Accidents happen in those wayward moments when attention has wandered, fatigue set in, darkness come on, or a fellow worker or truck has bumped into the employee. And it is against such moments that the protective devices are needed.

Have adequate first aid kits available, near enough to the work place so that they will be used.

¹ See *The Principles and Practice of Safety*, National Safety Council, Chicago, 1919, as well as other publications of this Society.

Have someone in each working group or department trained to administer first aid. But do not consider this person as substitute for a doctor. Call the doctor at once. Meanwhile, try to restore breathing, stop bleeding and make the patient comfortable. Use a solution of iodine freely. It prevents infection, is healing and cleansing.

Have a pleasant, well-equipped, centrally located first-aid room with a trained nurse in attendance as much of the time as the size of the plant and character of the work requires.

Have some one executive responsible for the prevention of accidents and the maintenance and installing of all accident prevention equipment.

Ventilation, Heating and Humidity.—The problem of ventilation is to keep the air fresh, uncontaminated and in motion. The problem of heating is to keep the air at a comfortable temperature. The problem of humidity is to keep the proportion of moisture in the air within certain healthy limits; otherwise neither adequate ventilation nor good heating will give satisfactory results. It is difficult to state convincingly in terms of the workers' health or of output, the vital importance of giving proper attention to these three closely related problems. Recent studies¹ indicate that neglect of them can mean a reduction in output as high as twelve per cent.; and can result in irregular attendance, sickness and headaches which indirectly contribute further to decreased efficiency.

It is occasionally helpful to remember that man is a "domesticated higher mammal." It is equally helpful to reduce the matter to even simpler terms in order to get an adequately scientific point of view. Man is also a physico-chemical engine; and his body functions properly only under definitely prescribed conditions of external surroundings and internal normality. With this in mind when evaluating working conditions, there will almost automatically be created an outlook which appreciates the significance of having plant equipment *always right*.

In regard, first, to ventilation, the removal of the grosser con-

¹ Great Britain. Industrial Fatigue Research Board. Influence of Hours of Work and of Ventilation on Output in Tinplate Manufacture. London, H. M. Stationary Off., 1919, p. 29.

See also Hill, Leonard, Atmospheric Conditions and Efficiency, Manchester University Press, 1919.

taminations must be provided for. Fumes, vapors, organic and inorganic dust, should be eliminated at the source by the installation of adequate exhaust pipes with hoods set as closely as possible over the point where the contamination is generated. The size of the exhaust pipes and the speed of the fan which creates the motion are matters requiring the most careful technical study, since upon these factors depends the thoroughness of the exhaustion.¹

The provision of fresh air, properly conditioned, will usually in the larger plants require some artificial ventilation. In any case the following points should be observed:

Each individual requires at least 300 cubic feet of free air space; and, depending on the character of the work, may require as high as 1,000 cubic feet. Since he breathes in between 250 and 350 cubic feet of air in a day of eight hours, it is safer that two or three times that much new air should be supplied during working hours.

All air supplied should be free of dust, bacteria and other contaminations.

Ample allowance should be made for the consumption of air by gas or oil used in the room, and additional ventilation be provided to offset this consumption.

Rapid air currents, that is, drafts, should be avoided. Yet it is one of the cardinal points of good ventilation that there *be a free movement of air*. Experiments demonstrate that the same air can be used again and again if only it is kept circulating.

“Excessive heat, vapor and injurious substances arising from manufacturing process or other causes require to be locally removed.”

“All toilets, lockers and other rooms of similar character require positive exhaust ventilations.”²

All heating surfaces should be located and arranged so that they cause no discomfort to workers.

All hot surfaces which it is not essential to expose should be

¹See ERSKINE, LILLIAN. Standardization of Working Essentials, *Annals, Am. Acad.*, v. 71, p. 86-91, May, 1919.

See also KENT, WILLIAM. Heating and Ventilation. (In *Mechanical Engineer's Pocket-book*, 9th ed., p. 681-716.)

²Requirements and Standards upon Heating and Ventilation. U. S. Council of National Defense. Advisory Commission. Committee on Labor. Wash. Govt. Print. Off., 1919, p. 14-15.

insulated by non-conducting material. This should apply to piping and surfaces of machinery as well as to walls and floors which radiate excessive heat.

Whatever ventilating system is in use, a periodic, thorough airing out of the workroom is valuable—before work starts in the morning to remove the “stiffness,” in the middle of the morning, at noon and in the middle of the afternoon.

Executive responsibility for ventilation should be clearly fixed; yet the maximum possible freedom should be left to the workers in each room to determine the conditions under which they will work. If the conditions as so determined are manifestly unwholesome, the remedy is not in a display of authority but in education of the group along familiar hygienic lines.

The amount of heat required depends largely upon the character of the work. For active shop work, where the whole body is engaged, 58 to 60 degrees F. is found to be satisfactory; at bench work and other less active work 65 degrees F. is suitable; while at clerical work 68 to 70 degrees F. is required. In order to assure uniformity and regular control, an automatically recording thermometer should be in operation in each room and should be checked up at least twice a day by the person in charge of ventilation and heating.

But the record of temperature will give a true picture of conditions only when correlated with a record of humidity. This correlation can be easily obtained by the use of a hygrometer which shows the per cent. of humidity in relation to temperature. From the standard hygrometrical tables it is then easy to discover whether sufficient moisture exists.¹

¹“In winter the dampest days are unmistakably the times of greatest efficiency. The reason is twofold. In general, the temperature rises at times of excessive humidity, and this in itself is favorable. Moreover, the air when taken into the house, does not need to be warmed so much as under other conditions, and thus it remains comparatively moist.

“In the spring and fall, when the temperature ranges from freezing to 70°, with an average of about 50° F., the best work is performed with a relative humidity of about 75 per cent. In other words neither the dry nor the wet days are the best. The summer curve (of output) is the most complex of the three. It rises first to a maximum at 60 or 65 per cent., then falls and once more rises to a higher maximum. We conclude that with an average temperature of 65° to 70° a relative humidity of about 60 per cent. is desirable.” HUNTINGTON, ELLSWORTH. *Civilization and Climate*, 1915, pp. 86-87.

Various devices for artificial humidifying are on the market; but for a plant that can attack the whole ventilating problem at once it is unquestionably desirable to install an air conditioning apparatus which in the same mechanism, washes, warms and moistens the air which is distributed. It is only where the nature of the product or process requires excessive moisture that some supplementary humidifying may be needed.

Ordinarily, however, our factories and office buildings do not give us moist enough air. The heat dries the mucous membrane and leaves it in a condition of lowered efficiency for resisting germs. Managers are not disposed to recognize the need for adequate humidity; but the use of a hygrometer for a few weeks will usually show convincingly that most plants should make some specific provision for moistening their heated workrooms.

Lighting.—Deficiencies in factory lighting are estimated by illuminating engineers as accounting for as high as a twenty per cent. loss in production where, as in textile plants, the work must be closely scrutinized. Bad lighting directly contributes to eye strain, headache and nervous irritation. We confront here a problem where correction depends as much upon an expenditure of thought as of money. Adherence to a few fundamental principles can help greatly to eliminate the worst lighting difficulties.

There are three points to consider regarding both natural and artificial lighting; its sufficiency, its continuity, its diffusion.

The minimum amount of light required at different kinds of work has been fairly well standardized, and the table adopted by the Illuminating Engineering Society is widely available.¹ In order to secure daylight sufficient to conform to those standards, the following conditions must prevail:

Windows should be as large as possible, provided they do not create a glare; and should be so located that artificial light is necessary only when it would be naturally used. Natural light is the most normal and effective for the human eye. Other

¹ See, for example, U. S. Council of National Defense, Advisory Commission. Code of Lighting for Factories, Mills and Other Work Places. Wash. Govt. Print. Off., 1918, p. 7.

The Principles and Practice of Safety, p. 11.

CLEWELL, C. E. Natural Lighting. Wash., U. S. War Industries Board, Employment Management Section, 1918, 10 p. Typewritten.

things being equal, it is to be preferred and sought as a source of workroom illumination.

The top sash of the windows and all basement windows should be supplied with ribbed glass to increase the refraction of light into the center of the room.

Even though a translucent glass over the entire window might give better diffusion of the light, regard for the worker as a human being demands that the window panes at the level of the face be of transparent glass so that the worker can see out of doors. Minor as this point may seem, it is fundamental to the maintenance of a cheerful factory atmosphere.

Where curtains must be drawn to remove the glare due to direct rays of the sun, the curtain should pull up from bottom rather than down from the top. This provides shade near the window and leaves the middle of the room still supplied with light from above.

Windows should be washed at the regular necessary intervals.

Reflecting surfaces outside the plant, as, for example, an adjoining building or another section of the same building across a narrow court, should be painted a light color to increase the supply of light within the room.

Reflecting surfaces inside the plant—walls, ceilings and where practical the machinery as well—should be painted a light color (preferably a soft, light green) to increase the light. Below the wainscoting, walls can be a darker color, in order to rest the eyes.

Work places, benches and machinery should be placed *at right angles* to the window so that the light comes over the worker's shoulder on to his work. The persistent ignoring of this simple but fundamental rule probably accounts for existing eye strain more than any other one factor.

To secure proper *artificial* light, it is important to observe the following principles:

There should be sufficient light for each worker irrespective of his position at his work, in accordance with the standards suggested in the above sources. Lamps should be fixed and stationary.

"The type, size and spacing of lamps and reflectors should be determined with special reference to the ceiling height and class of work in question."¹

A system of general overhead lighting is to be preferred, with

¹ Principles and Practice of Safety, p. 11.

the use of reflectors which make the actual rays of light from the lamps semi-indirect or wholly indirect. The light should be strong enough and so located as to remove sharp shadows and to remove the necessity for individual lamps except in special cases.

Where it is necessary to use individual lamps, it is important that opaque reflectors be used and so affixed that the light does not shine in the worker's eyes.

Care should be taken to avoid glare also from bright or polished reflecting surfaces.

Lamps should be operated from sources of supply which insure continuous and steady light. The flicker of some lamps where electricity is locally generated causes strain and fatigue.

Lamps and reflectors should be dusted and washed at regular intervals.

Emergency lamps should be provided, especially in passages and exits, to assure reliable operation if for any reason the regular lighting fails. Those lamps should be supplied from sources wholly independent of the regular lighting.

Switches should be so located that "at least pilot or night lights may be turned on at the main points of entrance."¹

Here again, the final word is: *Make some one executive responsible for these matters* and provide him with competent technical assistance so that the shop's lighting may be as effective, as cheerful, as scientific and as economical as possible.

Noise and Vibration.—The harmful effects of excessive noise and vibration are only beginning to be realized. Noise, especially when it recurs frequently at irregular intervals, requires an adjustment of the worker's whole nervous system which is taxing and wasteful of energy. It distracts attention, creates an irritating feeling of "jumpiness" and generally reduces the equanimity and efficiency of the affected person. Where noise leaves off and vibration begins is not always easy to determine. The deciding factor is the number of sound waves per second, and "it is difficult to determine whether or not it is the ear alone or the whole body that detects the sound in vibration. Hence the annoyance from sound is not easily separated from the nervous exhaustion resulting from direct vibration."²

¹ Code of Lighting, etc., p. 8.

² The Effects of Vibration in Structures, Aberthaw Construction Co., Boston, 1918. This and the following quotations are taken from this pioneer and exceedingly suggestive preliminary study of vibration.

Testimony is general that severe vibration "tends to tire the women and make them nervous, with the result that they become irritable and inefficient." "In the case of women, it seemed impossible for them to stand the vibration even temporarily on account of its serious effects. We believe that employees working under such conditions as we had were not over two-thirds efficient." Other evidence might be cited to the same effect, but it is sufficient to call attention to the seriousness of the problem. The question is: What can be done about it?

The elimination of noise is of course impossible under present conditions in certain processes. Machines have not been built with an eye to quiet action, and until machine builders attack this problem the most acute cause will remain untouched. Nevertheless, there are certain things which can be done.

The first essential is to realize that all *unnecessary* noise should be done away with; where there is the will, the way will begin to appear. The rubber-tiring of all trucks is a preventive measure of first importance. In many plants it will also help to have aisles covered with some sound-deadening composition, such as battleship linoleum. Where the nearby passage of trains is a noisy distraction as well as a cause of vibration, the remedy is not so easily at hand, although the better constructed buildings have a great advantage here. The use of electric power drives from local units greatly lessens both noise and vibration, and has the added value of reducing the objectionable flicker of the daylight which a mass of overhead belting is likely to create.

The elimination of vibration is fundamentally a matter of building construction. The structure has to be solidly based, and the evidence seems to point more and more to the use of reinforced concrete as the most non-vibrant material. Where the shaking is local, due to special machines, it is sometimes found necessary to build separate foundations for these machines. The use of some type of absorbent mat under machines also appears to be helpful. Rubber mats and ground cork mats as bases for certain types of machines, as for example, power sewing machines, are found to reduce the vibration appreciably.

In the last analysis, however, it must be admitted that the problem of noise and vibration is one which is only newly being studied. And until buildings are firmly anchored and sound

proof, and until machinery is designed to work with less pounding impact, the greatest advances cannot be made.

Seating and Rest Rooms.—The value of seats for workers is recognized in the legal provisions which several states make for women workers. But the value is not sufficiently recognized for the right type of seating to be provided. The wooden stool, the enameled steel stool, the chair with a flat board back, are still widely used. Unfortunately we know of no factory chair manufactured which conforms to scientific standards. This correct chair would embody the following features; an adjustable back with a padded rest (like that on a stenographer's chair) to support the worker immediately below the shoulder blades; an adjustable seat so that its height from the floor can be regulated—if made with a revolving seat the chair should have a locking device to prevent motion when the worker wants to be stationary; adjustable foot rests; and finally a cushioned seat. In short, a good chair is one which re-enforces and supports the body at those places where re-enforcement means less exertion, better posture, and consequently a better functioning of the vital organs.

Chairs in a factory are not a luxury or a frill. To one who understands that we are dealing with human beings who are in the first instance "physico-chemical engines," it will be clear that energy is saved by sitting, which can be better used in other directions; it will be clear that to vary the posture from sitting to standing, and from standing to sitting, is restful and conserving of strength. For this reason, the tradition that the worker must not be found by his foreman sitting down must go the way of many other time-honored but unscientific notions. In fact, the worker should be encouraged to sit; and there are many jobs now done standing which could be done with equal facility but much less fatigue if suitable chairs were provided.

The provision of rest rooms is often required by law where women are employed, although little, if anything, is specified about the equipment. Ideally, there should be a clear separation between dressing rooms and rest rooms. The familiar practice of simply providing benches in the locker room is wholly inadequate to meet the needs for which a real rest room is designed; neither is it sufficient simply to use a lunch room for this purpose.

Whether or not such rooms should be available for the men, depends upon the purpose they are intended to serve. If what

is desired is a place to rest and restore vitality, then that need should dictate the requirements. If a noon meeting place and social lounging room for all employees is desired, the equipment required is manifestly different. It is almost impossible to pronounce in general upon the provisions which a factory should make in this direction. The only point we wish to make is that if the choice is for a *rest* room, no one should be ashamed of the decision; and it *is exactly as good a business proposition to have a rest room for men as it is for women.* It was a scientific management expert who wrote recently that from a physiological point of view, it would be a good thing for workers to recline at full length in the intervals between work.¹ His point was that the total change in distribution of blood pressure which is assured by lying down is the most effective recuperative measure known.

Assuming, therefore, that a corporation, recognizing the value of rest from the physiological and business point of view, wants to provide a properly equipped resting place, what items should it consider? In the first place, the location of the rest room should be such that the noise, odor or other effects of work processes reach it as little as possible. The room should be quiet, cheerful, bright, clean and restful in atmosphere, hangings and furniture. The chairs and lounges should be comfortable and sufficient in number so that the worker will not have an attack of conscience if by occupying one for more than five minutes he deprives other workers of a chance to sit at all.

Finally, it is an important part of the atmosphere of the room that the employees should feel it to be *their room.* This feeling can be achieved in various ways; but there is nothing like responsibility to give a genuine sense of proprietorship. One way of securing this attitude is to have a committee of workers to administer this room, helping in the selection of its furnishings and in its maintenance.

As it works out today some rest rooms are well used; some are used at the start and then forgotten; some are used very little. It is, of course, better from every point of view that workers if they want to stretch out and sleep at noon (as many of them do) should sleep comfortably on a couch rather than on a work bench. But they must want to use the couch and they must feel that they are not getting a substitute for more wages when a rest room is provided, if the rest room is to be a permanently used and

¹ GILBRETH, FRANK B. *Fatigue Study*, p. 43.

appreciated asset. *And there is no way for the workers to make these decisions short of deliberately taking counsel with the management on the question of instituting and using the rest room.* But if the workers want one, will use it and will help to take charge of it, we see every advantage in its installation.

The statement above is underscored because it embodies a principle about the installation of all factory personnel equipment which although fundamental, is frequently lost sight of; the principle, namely, that the provision of equipment of any sort for people *without some simultaneous attempt to create a sense of need and a knowledge by them of methods of its use*, is neither appreciated nor in the long run taken advantage of. Old fashioned "welfare work" is in bad repute today partly because the workers were not taken into the confidence of the management in its administration, and it was, therefore, regarded as a paternalistic sop; and partly because it was conceived by workers as an effort to let "welfare" take the place of justice.

It should be clear from what has gone before that we have no interest in "welfare work" so conceived. The modern point of view looks in the direction of studying the elements in the problem of human relations which must be dealt with in order to have the factory operate efficiently; and if in pursuit of that end the employment administrator has at times to go somewhat afield, he does this deliberately as an organic part of his work of sound management and not with a motive of philanthropy. *The provision of right working conditions is in no sense "welfare work." It is a plain business and human necessity.* And until corporations are prepared to put their houses in order in these obvious matters, there is little use in launching into projects such as profit sharing schemes or other complex proposals which fundamentally presuppose an efficiently managed production organization in a physically well equipped plant.

Lunch Rooms.—In plants located at a distance from stores, restaurants, or the homes of a majority of the workers, there is much to be said for making some lunch room provision a part of the business equipment of the shop. Such provisions may as a minimum be confined to a place where workers may warm up their food and eat their lunches away from the work places; or they may be elaborate cafeterias and restaurants.

Cleaning.—The reaction of competent factory housekeeping upon the appearance and morals of a working force is in the long

run of great benefit. Workers dress better, they are more cheerful, they are more careful in the disposal of waste and rubbish in plants where the watchword is cleanliness. Nor is this an impossible ideal for any plant to hold in view, it matters not how dirty the processes may be. This is another case where regular executive attention to the problem is the price of good results. From the experience of plants where the housekeeping has thus been made satisfactory the following hints can be learned:

There must be a separate cleaning staff under a cleaning foreman. This staff should get an hourly rate of pay high enough to assure a regular and a conscientious force. The old notion that cleaners should get the lowest rate in the shop is the product of a time when bacteria were unknown and antiseptic methods of cleaning unheard of. It must be remembered that cleanliness involves not simply the removal of dirt—misplaced matter; it involves also the minimizing of harmful germs.

Methods of dry sweeping should give way to some method which lays the dust before it is collected. There are several good dust layers on the market; and even the use of wet sawdust, except for the fire hazard in storing dry sawdust, is better than dry sweeping. Vacuum cleaners are excellent where the nature of the work permits their use. Sweeping should be done as much as possible out of working hours.

There should be sufficient fireproof containers for waste material and rubbish, and these should be emptied at frequent intervals.

There should be a *regular schedule* for cleaning, at the necessary intervals, the workrooms, toilets, walls, ceilings, windows, lamps, reflectors, halls and stairways, yard, etc.

Drinking Water.—The value of an adequate supply of pure, cool drinking water will be quickly recognized, if we remember the physico-chemical aspect of our problem. "Water is a natural constituent of the body and is to be considered as a food, though not in the sense that it liberates energy. It aids in the absorption of food and carries away waste. It diminishes fatigue. It regulates body temperature and acts as a distributor of heat. And there seems to be no question but that the drinking of water lessens alcoholism."¹

¹DARLINGTON, DR. THOMAS. Present Scope of Welfare Work in the Iron and Steel Industry. Pamphlet, N. Y. Iron and Steel Institute, 1914, p. 6.

The first essential in having a good supply of water is to be sure the source is uncontaminated. Apart from the consideration of initial expense, it is clearly the most desirable standard practice to filter the water, to cool it to 50° by ammonia or other refrigerating process, and to distribute it throughout the plant in pipes covered with non-conducting material to bubbler fountains conveniently located so that there is one fountain for every forty workers. The faucets at these bubblers should be double; one from which a glass can be filled, and the other a nozzle which will throw up a sufficient jet of water so that one can drink two inches above the opening. There are several satisfactory bubbler nozzles on the market; but one which is especially good comprises simply a three inch circle of quarter-inch nickel pipe horizontally fixed, in which there are small perforations so located that the water flowing simultaneously from all the holes meets in one stream about two inches above the center of the circle of pipe. The water which is not drunk falls back without touching the pipe and there is no occasion for the drinker's lips to come in contact with the nozzle.

Where the process makes it difficult for the worker to leave his bench, some companies have wisely found it beneficial to have an attendant pass through the room every little while with water in individual drinking cups—much as the theater ushers pass water. They realize that it is almost impossible for workers to drink too much water; and therefore the more easy and attractive its drinking is made, the more it will be drunk and the better will be their health.

Sanitary Equipment.—Physiologically the provision of adequate, clean and attractive toilets is of notable importance, especially because of what we know about the relation of their condition to constipation and venereal diseases. The law usually requires a closet to every twenty workers; but this is a minimum provision. Other desirable conditions to observe are the following:

The toilet rooms for men and women should be completely separate from each other, and from the work rooms; and should be clearly marked "Men," or "Women." There should be screens before the entrances of these rooms which effectively conceal their interior from outside view:

Toilets should be adequately lighted at all times, and there should be adequate ventilation from outside the building.

The room should be kept at a temperature of not less than 60°F. during working hours.

Floors of toilet rooms should be of some moisture-proof, smooth material; and walls should be kept covered with clean, light colored, non-absorbent paint or other moisture-proof material.¹

There should be free provision of toilet paper; and, especially where employees have anything to do with the handling of food, nearby basins in which to wash the hands.

There should be individual closets with wooden seats, with bowls of vitreous china or other approved material and adequate pressure for flushing. Each closet should occupy a separate compartment and be provided with a door opening outward.

In conclusion, the proper maintenance of toilets should be referred to, as it unquestionably offers occasional difficulties. In our experience these difficulties are not to be permanently overcome until managers realize the nature of the problem. The abuse of toilet facilities occurs most frequently where *workers are unfamiliar with their proper use*. It cannot be too strongly emphasized in this as in other connections, that in those factories where workers are recent immigrants they are predominantly *peasants*. They are from rural regions of southern and eastern Europe and have never seen or heard of modern plumbing arrangements. Accustomed as they are to the crudest sort of sanitary conveniences, they assume that they can treat water-closets in impossible ways. The problem is an educational one. Many large firms find it worth while to have an attendant always on hand in the toilet rooms. Where there is a medical staff, the method of operation and proper use of all modern plumbing devices should be explained in the course of the educative work in personal hygiene. For managers to make existing or past abuses of the toilet or washing facilities an excuse for continuing old and unsanitary equipment, is to place responsibility on the wrong shoulders. The rank and file of workers are not inherently wanton or vicious or destructive in these matters; it is more often the case that they do not know any better and have never had the chance to learn.

Standard practice in washing facilities depends in part upon

¹ See the standards required in the excellent leaflet issued by the Industrial Welfare Commission of California, Order No. 4, Amended, under date of Jan. 7, 1919.

the nature of the work. There is no doubt from a physiological point of view but that, where employees leave work at the end of the day wet through with perspiration, it is good hygiene for them to take a shower bath before going out doors. The fact that thousands of workers have done and still do otherwise does not lessen the hazard.

"The man who leaves the plant. . . saturated with sweat, is 80 per cent. more liable to respiratory disease during seven months of the year than the worker who has washed up and changed to street clothes in a properly heated room."¹

"Shower baths affect the circulation of the blood, not only in the skin but in the whole body. They produce a redistribution of the blood in the body, and for the time being there is an actual change in the blood itself. Cold showers increase muscular capacity for work. Showers eliminate more rapidly the products of waste and so constitute one of the methods of relieving fatigue."²

Where the character of the work calls for them it is, therefore, valuable to furnish showers and even more valuable to encourage their use by legitimate educational methods. Several attendant conditions must, however, be assured if the use of the baths is to be satisfactory and permanent.

There should be a warm shower bath room—one kept at all times of use at 80°. This room should adjoin the dressing room, should be clean, well lighted and well ventilated. The floor of this room should be covered with removable rubber matting, wooden grating or some other material to keep the feet off the cold cement.

Hot and cold water should be provided, as well as soap. Towels should be furnished by the company upon deposit of five cents and should be laundered at least weekly at the company's expense.

There should be one shower to every eight or ten workers.

In plants where the work is less arduous but still dirty, the installation of lavatory basins or enamel troughs is requisite. Individual basins are, of course, more expensive to install and to maintain; and if used one basin to every five workers is needed. However, "where large numbers must be accommodated, . . . where the worker should strip to the waist in order to wash

¹ ERSKINE, LILLIAN, *op. cit.*, p. 93.

² DARLINGTON, DR. THOMAS, *op. cit.*, p. 7.

more thoroughly, a satisfactory substitute is a perforated pipe, conveying tempered water, installed above the middle of the trough at a height of 18 to 24 inches. Stoppers should be pulled so that all washing is done in running water; and a trough length of two feet to every five workers is also necessary."¹ Here again the provision of ground soap and toweling is imperative. Whether paper or bath towels are to be used will depend in large part on the company's willingness to bear the added expense of the cloth towels which on the whole are much to be preferred.

Under any conditions of work, the hygienic value of washing the hands before eating should be appreciated and the necessary provision accordingly made. Cleanliness of employees at work spells self-respect; it reduces the likelihood of disease; it helps to assure bodily integrity.

Where men chew tobacco at work it is necessary either to make some arrangement for cuspidors; or else prohibit chewing and spitting altogether. Promiscuous spitting about the plant can be reduced to a minimum with a little effort; and an important adjunct of a clean-up campaign is to have on the stairways and at the necessary work places an adequate supply of receptacles. It is also useful to have all floor corners painted white. Galvanized iron pans filled with a solution of lysol or some other disinfectant, light cardboard boxes filled with sawdust, boxes filled with sand—these are some of the prevailing methods of providing cuspidors. Care must be exercised to have sanitary disposal of the contents, which should be removed daily and burned.

One further detail deserves mention; the elimination of flies. There are industries, like the food-preparing trades, where flies are especially dangerous. But the faithful use of screens, the use of giant fly-traps, the keeping of all waste and rubbish carefully collected and burned—these work wonders in ridding the plant of this germ carrier.

Dressing Rooms.—Standard practice in dressing rooms depends, as with washing facilities, on the nature of the work. Where a complete change of clothes has to be made, the need is for full length, individual lockers. In trades where the work is especially disagreeable because of odors or dangerous because of dusts or vapors, two dressing rooms are sometimes provided.

¹ ERSKINE, LILLIAN, *op. cit.*, p. 93.

The worker, in such cases, leaves his street clothes in his own locker and proceeds through a shower bath room to the room where the work clothes are hung on racks over steam pipes. At night the work clothes are left to dry; the worker takes a bath, and proceeds to his locker and his street clothes with the traces of his work quite effectually eliminated.

Dressing rooms should, of course, be completely separated from the work room; and there should be completely separate rooms for men and women. There should be a bench between the rows of lockers, and if possible workers who leave at the same time should have alternate lockers to avoid congestion. The lockers themselves should have a steel grill bottom and top so that a draft of warm air from steam pipes beneath the lockers can continually circulate, thus drying the garments that are left hanging and preventing dust from settling. In size such lockers should measure sixty inches high by twelve inches wide by fifteen inches deep; and they should be provided with a combination lock, like those used on safes, to do away with the bother of keys.

The importance of periodic fumigation of locker rooms and lockers should not be forgotten, since nothing so contributes to their non-use and unpopularity as a reputation for uncleanness or vermin.

The provision of full length individual lockers in a separate dressing room is not, however, essential under all conditions. Separate dressing rooms are sometimes required by law for women and this is essential if any change of clothing takes place. But open racks with coat hangers for coats, with individual lockers about fifteen inches in each dimension for hats and lunches prove a satisfactory arrangement in many places. Similarly for men in plants where no complete change of clothes is necessary, it is usually adequate to every purpose if there are clean, dry, safe racks where street clothes can be hung. These places should, however, be wholly separated from the work room, where there is little likelihood that dust, dirt or odor will harm the clothes. But it is desirable for each worker to have some safe place to keep his more portable possessions, shoes, hat, lunch, etc.; and the provision of lockers fifteen inches in each dimension provides for this in a satisfactory manner.

Health Equipment, Hospital, etc.—The extent of a corporation's equipment in first-aid rooms, doctors' and nurses' offices,

hospitals, special clinics and laboratories will depend on other factors than the dictates of standard practice, since beyond certain legal minima, standards in this field are still in the making.

A separate first-aid room should, however, be provided in any plant having a hundred employees or over. Its equipment should include a cot, blankets, stretcher, running hot and cold water, screen, and the usual supply of bandages, antiseptics and instruments. As the equipment becomes more elaborate, its purchase should be turned over to the nurse or doctor in charge. One simple rule about the arrangement of first-aid rooms can also usefully be suggested. There should be a door or screen between the employees who are waiting to be attended and the one who is being ministered to. It is usually poor psychology for the prospective patient to witness the afflictions of his fellow-worker who is under treatment.

Factory Exterior.—There is an unquestionable psychological value both with the community and with employees in having the factory exterior neat and attractive. There is no inherent reason why all buildings devoted to industrial uses should not be architecturally significant or at least inoffensive. It is not our purpose here to indulge in utopian flights; but it is useful to consider that the squalor of so much factory environment today finds its reflection in a widespread attitude of indifference if not of down-right hostility toward work, and to appreciate that by taking thought one progressive employer after another is demonstrating that factory buildings can be made varied, interesting and even beautiful without undue expense.

Certain things that every corporation can and should do are to keep its own yard in order, its waste picked up, and its rubbish pile concealed or removed altogether. It can also provide a sidewalk to the factory entrance on which one can walk dry-shod at all times of the year. Again, the plant can be kept painted. Whether the management will go beyond this and cultivate a lawn, train vines against the factory walls, put in window boxes and plant shade trees, is not a matter of standard practice. It is rather a matter of taste and judgment. But if, without gaining the reputation of adorning a "whited sepulchre," the management can create an exterior of which all in the plant and in the community are proud, there is everything to gain thereby. It is only useful to recall that there are historic warn-

ings against cleaning the "outside of the cup," while within "they are full of extortion and excess!"

We conclude this subject of standards of right working conditions with a summary of the two most essential points:

First, we have been considering the items of equipment necessary to supply a right working environment; and our conclusions are based not upon "welfare" notions but upon patent facts of man's physiological characteristics and demands.

Second, we have called attention to a great variety of what may seem minor items, but which do in fact combine together to be matters of critical importance. The experience of almost every plant we know convinces us that *until the administration of these items is centralized as one function, preferably under the personnel department, adequate and constant attention is not paid to them, and their proper maintenance is not assured.*

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CHAPTER XI

TRAINING EXECUTIVES

Management as most recently understood means essentially leadership. "A man's right to have authority," says the modern science of administration, "in proportion to the scope of his creative power is the first constitutional principle of business."¹ But effective leadership and creative power mean in plain English: Ability to deliver the goods in whatever field of human effort the leadership is asserted.

In industry, ability to deliver the goods means, of course, far more than sheer ability "to get out the production." For getting out the production is seen today to involve the intelligent recognition of a great variety of factors. That managers have frequently been able to get out production and deliver the goods in the past without much conscious preparation or special training, argues nothing at present. For the management of industry today has become elaborate, specialized, complex; the business structure is difficult to understand, even for those who are thoroughly familiar with its working, and internal plant operation requires a high degree of trade skill, accounting skill, personnel skill.

In short, leadership in modern industry is destined to depend increasingly upon education and specialized training. Manifestly, improvement in methods of factory operation in the labor side, involves all groups in training for new efforts and in the use of new methods. But it is peculiarly the management's job to understand that plant administration is a science and an art and that because this is so, it can by taking thought and by training make its own efforts more scientific and more human. Good management is not accidental; it is not today achieved by arbitrary rule of thumb methods. It is created by intelligent leadership based on a mastery of the scientific method and the fruitful administrative experiments of the last ten years. For managers, executives, superintendents of every rank, and

¹ FERGUSON, CHARLES. *The Great News*, p. 48.

foremen, the great need throughout industry is therefore special training. For this reason we occupy the present chapter with a discussion of methods of training higher executives and in the following chapter take up the problem of foremanship.

Any effort to cope with the present extent of executive incompetency implies some prior agreement as to the qualities the executive should possess. Suggestions as to the nature of these qualities are therefore included below. But we recognize that even if all managers are agreed that these are the desirable or even the available qualities, the problem of identifying them in a given individual still remains to be solved.

Qualities of the Successful Executive.—The efficient, successful executive has certain characteristics which may suggest a criterion for use in the selection and training of industrial leaders.

He has *character*. He is truthful, temperate, just, benevolent, magnanimous, and sympathetic. He is honest. To be direct and straightforward with every man is the crucial test of genuine executive ability.

He has *creative, sober imagination*. The ablest leader must be able to project himself into the future. He is a practical idealist who not only dreams of new ways of doing things, but can actually do them. He thinks and lives in the future. Property and business are to him a means to an end; they are an expression of creative activity.

The business leader has *sound judgment*. He knows whether his ideas are workable, and when he plans for the future, he has common sense as well as imagination.

Every executive needs *courage*, if he is to transform his ideas into action, and if he is to put new processes and better methods into effect. Many a leader has failed because he was timid, and because he tried to please everybody. A good manager stands his ground unflinchingly against the inertia of habit and prejudice.

A *sense of humor* is an essential asset to the executive. He must be able to see people and events on their comic side; and understand that most situations are bettered more by laughter than by weeping. An even temper, a hearty laugh, or a pleasant smile win the friendship and the cooperation even of those with whom he does not come into close contact.

Insight into human nature, *ability to understand men*, enables the manager to put himself into the place of his subordinates, and to

handle difficult situations with sympathy and justice. "To censure is easy and in the power of every man, but the true counselor should point out conduct which the present exigency demands."

The progressive business manager is *receptive*. He is open-minded and alert, ever ready to gather with unprejudiced judgment information on all the subjects which are related to his work.

He has ability to collaborate with his fellow executives and with those whom he directs for the common good. He surrounds himself with an organization designed to give all departments of the plant and all employees, the opportunity for sympathetic teamwork. In a word, he is a leader in *cooperation*.

The enormous mass of detail, due to the subdivision of modern industry, and the great distances which orders must often travel, make *organizing ability* an essential,—organizing ability, however, which has regard not only for efficiency in production, but for the development of the individual worker. "The art of management has been defined as knowing exactly what you want men to do, and then seeing that they do it in the best and cheapest way. No concise definition can fully describe an art, but the relations between employers and men form without question the most important part of this art."¹

"The subtle efficiency of tact" is required of the executive. This quality expresses itself chiefly in the *courtesy* with which he meets and deals with all associates. The value of this attribute is emphasized more and more each day. "Industry awaits the administrator who shall be all that a gentleman should be, who shall use his power with gentleness, and his wealth with imagination, and shall illuminate the world of private property with the light from the far away interests of the heart."²

The manager must usually possess an expert *technical knowledge* of the field under his immediate supervision, a full acquaintance and familiarity with all the phases of the business in which he is engaged, and a clear perception of its relations to the world of industry. He is usually an authority on certain scientific processes. But he should be more than that. He should have a grasp of larger problems of economic organization and coordinate his own work with the outside factor.

¹ TAYLOR, F. W. Shop Management, p. 21.

² JONES, E. D. Business Administrator, p. 208.

Character; creative, sober imagination; sound judgment; courage; a sense of humor; ability to cooperate, to understand men, and to organize; receptivity; courtesy; expert technical knowledge,—these are essential qualifications of the business executive. By what training may they be fostered and developed, and what are the conditions necessary for the proper accomplishment of that training?

Essential Prerequisites for Training Leaders.—Time, equality of opportunity, and fair financial and non-financial rewards are the three essential prerequisites for the successful instruction of leaders. Educational work requires time. In order to be effective, it must spread over a long term. Moreover, it costs in real effort. Men cannot strain through a hard day, and then effectively pursue studies for self improvement; for the powers of thinking and producing have been diminished.

A shorter working day and instruction given on company time are the two solutions of the problem. Some concerns set aside a period of several weeks for intensive courses; others give a few hours a week for half a year, a whole year, or more; others grant their employment managers, factory inspectors, industrial secretaries, and service superintendents leaves of absence and pay their expenses at technical schools.

A fair opportunity for every employee to take the training courses is the second essential. An organization which offers to all ambitious workers the greatest chance for personal development is promoting the highest and best type of efficiency. The presence of nepotism and favoritism is fatal to executive morale. Every man must be permitted to bring out the best that is in him and to advance because of his ability. Progress depends less on mechanical perfection, than on the liberation of human personality.

A final prerequisite for the effective training of leaders is a just system of financial and non-financial rewards. Extraordinary efforts must be accompanied by increased remuneration. Whether it should take the form of bonuses, profit sharing, or special premiums, is a problem which we have briefly considered elsewhere.

The non-financial rewards—advancement in honor and in responsibility—are usually as powerful a stimulus as an increase in salary. If the administration will chart the possible steps in promotion, and keep the way open; if it will select men to under-

study the positions of influential executives, minor executives will as a rule take the initiative in carrying forward their own development.

Members of the Training Courses.—The selection of executives who are to take the training courses is an important matter. They should be chosen because of a conviction that they have potential powers. There is a large field from which to draw. First and most significant is the plant itself; second is the outside world,—other factories, the colleges, technical schools, and professions.

The factory is, of course, the principal source of supply. The men who are already executives need education as much as do the workers in the ranks. If they are to be efficient, if they are to keep abreast of the times, they must study and learn continually. This is especially true of the minor executives,—those who hold positions of responsibility without having final authority. Superintendents and their assistants; department managers with their staffs of buyers and salesmen supervisors; inspectors; industrial experts from the planning, engineering, and the employment departments; accountants, and auditors from the clerical force, and the foremen, subforemen, gang and speed bosses,—all should from time to time be members of classes for organized instruction.

In order to assure impartial selection from among executives for this training and subsequent advancement, some gauge upon their comparative ability is needed. The rating scales already discussed are exceedingly useful in this connection.

In the search for executive material in the United States, the latent ability of the laborers within the plant has often been neglected. Under the German system of widely developed industrial training, which searches out the capacity of every factory worker, 65 per cent. of the leaders in the foremost industries have come up from the ranks. American industry would undoubtedly profit by a widened basis for selection of its executives.

Other plants in the same line of work can also furnish candidates for executive training, if there is some organized plan of promoting people from one plant to another. Managers are beginning to realize the value not only to society but to their own plant of encouraging and assisting employees to get better positions with other concerns. But a policy of advancing execu-

tives "up and out" requires special executive training if it is to be successfully carried into effect.

The professions also furnish their quota of executives. Large scale management looks to the engineer, the chemist, the physicist, the doctor, and the educator for guidance and advice; and members of these professions are increasingly finding themselves in administrative positions where executive training proves indispensable.

Finally, university and technical school graduates are being largely selected for positions which call for general intelligence, and for ability to meet and handle people. They have been trained in the proper approach to new intellectual problems; they know how to generalize; they see the particular in relation to the whole; they are more mature and are able to advance faster than are men who have entered business earlier in life. But their general training must usually be supplemented by special intensive instruction in the corporation if their effectiveness is to be turned to account at once.

Administration of Training.—The administration of instruction and the problem this involves must be considered in any discussion of executive training. Where the firm is sufficiently large to warrant the expenditure, a training director should be in charge; and there should be an able corps of teachers and lecturers. The director's work will be to organize courses and prepare manuals and reading lists. He will keep his staff of instructors constantly informed, through meetings and personal conferences, of the general training policy of the company. And he will systematize his work in such a way that a standard schedule, like that of a graded school, may be followed, and men may be started wherever their capacity permits. He will not, however, confine his attention simply to the study of conditions in his own plant. He will investigate the training methods employed in other industries. In a word, he will be the *liaison* officer between education and industry.

It is difficult to find men with just the equipment to fill the position of director of education. Companies which carry on corporation schools find it necessary, in most cases, to train their own educational supervisors. Several attempts have also been made in special courses in the universities to prepare men for this field.

All instructors for executive training courses should be trained

men—trained in the subject that they are to teach, and in the art of teaching it. The relative emphasis in their equipment will depend upon the training policy in force. For there are three types of corporation schools: Those which prepare workers for a specific job in the plant; those which are designed not only to teach apprentices in any field the “technicalities of a specific trade,” but to develop initiative, resourcefulness and ingenuity in the workers; and those which conduct general educational courses “designed to give the employees an opportunity for general educational broadening, perhaps something that had been denied in their school days.”¹

It is, as a rule, easiest to get teachers for the general educational work. Enough college and normal school graduates with the requisite personal qualifications are usually available. But good technical and trade instructors are rare. For they should be familiar not only with the technique of teaching, but should have had from three to five years trade practice in their subject. “Generally for industrial training, the best results will be obtained from the practical man trained as a teacher, for he, and he only, has a thorough knowledge of the trade, so that he may analyze it, and realize as well what the employee must know.”² Pedagogical experience is, however, as necessary as the trade experience; for a person who understands the art of teaching can produce results in a much shorter time than can the untrained foreman or man from the ranks.

An Outline for Instructor Training.—(From a company which believes that “there are three things which make for the ideal instructor. . . . A complete knowledge of his subject, knowledge of how to instruct, and a pleasing and forceful personality.”)

I. ANALYSIS AND CLASSIFICATION OF TRADE KNOWLEDGE:

- A. Introductory talk
 - purpose and problems of the work, the kinds of trade training
- B. Broad look at industry
 - different types of jobs
- C. First steps in analyzing a trade
 - picking out the block and subdividing it into jobs
- D. Arranging these jobs in the easiest order for learning
- E. Selecting a rating scale and determining at what points it should be used
- F. Correlated information

¹ N. A. C. S., Seventh Annual Proceedings, 1919, p. 621.

² N. A. C. S., Seventh Annual Proceedings, 1919, p. 608.

II. LEARNING HOW TO IMPART IT TO OTHERS:

- A. Introductory talk on work of this section
defining instruction, the instructor's problem, and the personality of the instructor
- B. Preparing learner's mind for new material
- C. Presenting the new material to the learner
- D. Helping the learner master new material
- E. Checking up the learner to see if he has mastered new subject
- F. Laying out typical lessons using methods just studied
- G. Practice instructing

III. CORRELATED FACTS, RECORDS AND COMPANY POLICY:

- A. Little talks on psychology as related to instructing
- B. Mechanical drawing
- C. The structure of wood
- D. Industrial design
- E. Company policy and attitude of instructor to men in shop
- F. Records

Time of Training.—The cost of instructing men for their jobs is often great, yet many business leaders have such a keen appreciation of its value to the firm that they not only support it entirely, but give it on company time. Perhaps, however, if the cost were borne both by the company and those who are studying, there might be more sustained enthusiasm. Employees may not value what they receive for nothing. The management might cover one-half or two-thirds of the expense, and refund the money paid by the students when the course has been completed.

Class Work.—All class work should be planned with reference, first to the work of the production, sales or financial department which the official is to enter and, second, to learning the art of handling men. It should include subjects from the technical and liberal arts, from production and personnel fields of work. Classes are held in the plant itself, or in cooperation with a nearby university, a public school, a Y. M. C. A., etc. The classes should not be too large. The training of executives requires constant individual supervision.

Where the executive must be a specialist in the technical process which he has under his direction, he needs scientific courses. Lessons which tell the story of raw materials, and give their history from the crude substance to the finished product, and lessons in science, mathematics, and mechanical drawing are often essential.

Of the liberal arts, history, political science, sociology, phi-

losophy, psychology, English, and public speaking are all valuable for the business executive. They give him a substantial basis upon which to form a fair, accurate, and unprejudiced judgment. They really require, however, an extended period of training—one which has preferably begun long before he entered industry.

The art of handling men is a subject which is more and more becoming a field of its own. During the war, the government appreciated so keenly the need for expert assistance in handling the labor problem, that it organized courses for training employment executives. In several instances these have become permanent, and include in their curricula a study of business organization, labor policies, industrial health, trade union problems, statistics, and psychology. Employers are beginning to realize their value, and are sending their personnel executives to New York, Pittsburgh, Cambridge and elsewhere, where the schools are established.

The instruction for those who would become executives may well comprehend a much broader training than could be given in class work. Lectures by high officials, shop talks and committee meetings are all excellent mediums through which to start the discussion of any ethical problems which the men are interested to solve. There may also be courses of lectures, seminars, an organized use of the library, group conferences, committee systems, rotation in different positions, visits to plants and museums, and scientific society and study club meetings.

It is difficult if not impossible to argue that any particular subjects have unique value in helping to "build character." Character building, vital as it is where the development of executives is involved, is largely a by-product of the doing of any worth while job well. Yet if the instructor is a man or a woman with lofty purposes, intelligent ideas, warm heart and a keen devotion to his subject, he will inevitably impart a certain quality of moral earnestness which is precious and in need of extension.

Examples of Courses for Training Executives.—Corporation training schools arise in response to such individual demands that no two of them are exactly alike. Some are open to all employees, others are arranged primarily for foremen and inspectors, while still others are planned to meet the needs of college graduates.

Courses given by Goodyear Tire and Rubber Company, Akron, Ohio.—"Every executive in the plant, except some of the inspectors, is

in school. All of the major executives, from the production superintendent down, are taking some kind of educational courses. . . . Our organization runs somewhat in this way: the inspector is the lowest grade, or first step on the ladder of the executive positions. Next in line is the head inspector, who oversees the work of a number of inspectors. We work in three shifts a day, so that it is necessary for us to have shift foremen, and the best man in line for promotion gets one of these positions; then he becomes a department foreman, and so on up to the position of production superintendent."¹

*"Production Flying Squadron"*²

The object of the "Flying Squadron" courses is to provide a broad general and technical background. The several hundred men trained in this manner are made thoroughly familiar with every detail of the manufacture of rubber and are therefore competent to assume positions of responsibility throughout the plant.

Public speaking.....	26 weeks	} Two hours per week
Letters and reports.....	13 weeks	
Sheldon Introductory Salesmanship.....	13 weeks	
Economics.....	26 weeks	

Rubber manufacture practice.....	39 weeks	
Economics:		
(a) Organization and management.....	26 weeks	
(b) Costs.....	13 weeks	

Goodyear administration:		
(a) Business principles policies.....	26 weeks	
(b) Factory management,—practice and problems.....	39 weeks	
Labor:		
(a) Employment management principles }	} 13 weeks	
(b) Employment management practice . }		

"ENGINEERING SQUADRON"

Shop mathematics.....	39 weeks	} Two hours per week
Mechanical drawing.....	39 weeks	
English.....	39 weeks	

Shop mechanics.....	39 weeks	
Mechanical drawing.....	39 weeks	

Shop mechanics (physics).....	39 weeks	
Engineering economics.....	39 weeks	

¹ MR. CRAIGMILE. N. A. C. S., Seventh Annual Proceedings, 1919, p. 614.

² From a typewritten manuscript.

"INSPECTORS"
(Section A and B)

Arithmetic.....	39 hours	}	Two hours per week
English.....	26 hours		
(a) Economics, public speaking.....	13 hours		
Economics.....	26 hours		
Rubber manufacture practice.....	39 hours		
Labor:			
(a) Employment management principles } ..	13 hours		
(b) Employment management practice.. }			
Charts and reports.....	13 hours		
Factory costs.....	13 hours		
Mechanical drawing.....	52 hours		

Requirements: Section A: Grammar School Education and Mental Alertness Test
 Section B: Mental Alertness Test only
 Section B men will have 39 hours of straight English work

"FOREMEN"

Department management: Charts, reports, department operation
 Economics: Principles, application
 Costs: Fundamentals, details
 Labor: Labor policies
 Guidance: Consultation, development records
 Weekly events: Lectures by best business talent available

Materials: Crude rubber, cotton, compounding materials, and compounding
 Manufacture: History, general processes, products
 Organization: Analysis, supervision functions, of manager and sub-executives, human factors, initiative and advancement
 Mathematics: Arithmetic, algebra, trigonometry, calculus
 Library: Book reviews, reading courses, current events
 Recreation: Gymnasium, games

Synopsis of a Course for Minor Executives of Another Large

Corporation

FIRST YEAR

Advantages of the course
 Elementary concepts of the physical sciences as applied to the business
 Studies in units of measurement
 Definition of fundamental terms used in the business
 About fifteen detailed lessons giving a thorough analysis of the physics and chemistry of the business
 Modern industry and business principles
 History of the corporation
 Processes

SECOND YEAR

Two-thirds of time: Processes, equipment, finished product

One-third of time: Management, organization, welfare work, accidents, sanitation, relation of the foreman to the plant

The Laboratory Method.—The efficient staff executive must almost necessarily have a knowledge of the business as a whole. One of the surest ways for him to get this is to work through all the departments of the plant by means of a combined study and laboratory method. Laboratory work—the actual learning by doing—gives an idea of processes; while the study forms the basis for a scientific outlook. The Southern Pacific Company School for the training of executives is founded on this idea, and eighteen per cent. of the important promotions have been given to graduates of the special training course. Mr. Norman Colyer writes:

“The aim of our student course is to give to young men in the employ of the Company an opportunity to pass through different departments for the purpose of gaining such coordinated knowledge of the entire railroad as will fit them better to assume positions of responsibility. It is, in fact, a laboratory course wherein the student performs the actual work of the department to which he is assigned, supplemented by a parallel course of reading in text-books and railway publications and periodicals Briefly, the procedure is as follows: Upon appointment, the student is first placed at a station of medium size for a term of six months. This is because the station agent handles both the beginning and the end of transportation. The student is expected to perform such duties as are assigned to him by the agent, and the agent is expected to afford him such diversified experiences as will give him an all-round knowledge of station work, including ticket office, warehouse, baggage room, yard, and the solicitation of business. Being an extra man, the student is not bound down to routine, but is permitted to distribute his time in such a way as to treat each feature with equal thoroughness. Next, the student is assigned consecutively to Maintenance of Way, the office of the Superintendent of Transportation, Motive Power, Train Service, Accounting Department and Tariff Bureau, spending three months in each. This completes his second year as a student, and he should now have a working knowledge of the several departments of the railroad and their mutual interdependence. At the student's option (subject to the approval of the management) he next elects to specialize in either Operation and Maintenance, Passenger and Freight Traffic, or Accounting.”¹

¹ BEATTY, ALBERT J. Corporation Schools, pp. 58-59.

Lectures.—Lectures, especially if they are illustrated with slides and motion pictures, and are conducted like a forum, with an opportunity for questions and discussions, are a valuable part of any plan for training executives. A company man, who has been especially successful in his own particular field should occasionally speak to the students and present his personal experiences and ideas on the subject that they are studying. And at other times an outside lecturer, who is widely informed and a specialist, should be used to bring in a new point of view and new enthusiasm.

Group Conferences.—The group conference, which in many concerns is both departmental and interdepartmental, may be made an effective educational factor. It is like a college seminar,—a place in which topics of importance to everyone may be discussed. Company policies, standardization, the larger industrial interests of the plant and trade success should come up for open debate. Group conferences broaden the horizon, and develop the ability to think clearly and quickly, but they should have a leader to guide them. If each member feels that he is in a measure responsible for their success, they may be made a source of real professional inspiration.

Committee Systems.—The committee system may be made another important center for the development of executives. Committees for the handling of problems of finance, accounting, production, and marketing have been in existence for some time, and recently many of the human relations problems have been included,—employment, promotion, transfer, health, safety, etc. An interesting example is the committee system of the Montgomery, Ward Company of Chicago.

“All executives, minor as well as major, take part in running the affairs of the business. . . . It is a plan to delegate authority, to relieve the heads of the multiplicity of details and have them free to handle the big problems of finance, general plans, policy, etc. . . . As organized and conducted by this company the committee system. . . . has logically three functions:

1. Legislative.
2. Administrative.
3. Educative.

“*The Legislative function* may be defined as the power and authority to devise and lay out systems and set up rules for the general conduct of the business. There is a board in supreme authority over all which

legislates on matters of policy and upon systems as they may effect policy. It has the power of veto on any or all boards. This board is called the Officers' Board. The lesser boards and committees may legislate upon matters that come within their jurisdiction which is defined when the board or committee is created.

"*The Administrative function* is charged with the execution of rules and systems as they may be set up and defined by the legislative. One function is not definitely divided from the other, however, as all boards and committees may legislate on certain matters, as well as administer them.

"*The Educative function* needs very careful definition. All members of Boards and Committees have each a definite position to fill. . . . Every higher executive is a member of some board and he must so arrange his work that he will have time to attend all regular meetings of his board as well as serve on committees as he may be selected. It is not an imposition upon any executive's time to attend board meetings or attend to committee work—each board meeting, each committee appointment is a real opportunity to serve not only the business but also to bring himself forward into a large sphere of development and usefulness. . . . It is indeed a privilege, and should be considered so, to take part in Board and Committee work—it brings one away from his own department where he may be lost in a maze of detail, and carries him out into contact with the other departments and teaches him what the other fellow's problems are. It gives him an excellent perspective of the business as a whole.

"Each man's work on a board or in a committee is judged as carefully as the work he performs in his own division. . . . He should realize that a task well done serves both the business and himself. One's work on his board or in his committee may be the means of placing him in a more responsible position.

"Membership on a committee gives one the opportunity to become educated in the principles and details of our business. It is the system we employ to broaden and develop the members of our organization, and it spreads the responsibility for efficiency in our various activities, the details of which are too many for one man to master or supervise. There is therefore a definite object in placing anyone on a committee, and this object may be defined as follows:

1. You are appointed in the belief that your experience and knowledge will enable you to give valuable advice, and that the knowledge you obtain from other members of the committee will tend to broaden your own knowledge of the business to the benefit of both the business and yourself.

2. You are appointed in the belief that you will express your opinion frankly and freely and assume your full responsibility for any action taken by your committee, and this will be expected of you.

3. Membership on a committee places all members on the same level in that committee. Your opinion and your vote are as important as that of anyone else in its meetings.

4. If you differ from the findings or conclusions of a committee you must register an adverse vote, or submit a minority report or you will be held to concur in its action. The time to talk is in the meeting, as later explanations are of little avail."¹

A railway company has found that committees appointed to "bring about the economical use of locomotive coal" have been educative as well as economical. In 1916, Fuel Committees, consisting of the Superintendent (Chairman), Master Mechanic, Road Foreman of Engineers, Principal Roundhouse Foreman, from two to eight Engineers, and from two to eight Firemen, were appointed in each division. The engineers and firemen were changed every six months; the other officials were permanent.

The purpose of the committee was to promote fuel economy by:

- (a) Stimulating interest.
- (b) Creating friendly rivalry through a system of comparative reports showing the success or failure of each employee.
- (c) Exchanging ideas and experiences.
- (d) Creating a council from which friendly advice was sought and given.

One of the most important results of the committee system is the training it gives in the scientific approach to human relations problems. A large firm writes, "The one feature that we particularly insisted on from the beginning was that all (committee) decisions should be based on fact and not on tradition or personal prejudice."

Inspection Trips.—Inspection trips, both to other plants and within the factory itself, give a broad, general view of the activities of the industry which is invaluable to the executive. They supplement class training and increase individual efficiency. They should be as carefully planned as is a class room recitation and the students should know where to go, what to see, what questions to ask, and what items to discuss.² Otherwise they may be distracted and fail in the accomplishment of the object for which they are sent.

¹ From a circular letter.

² See Appendix A for outline of topics to be considered when the visit is to the personnel department.

Sometimes the students are required to act as messengers about the shop and to substations and agencies throughout the city; sometimes they are asked to go to different departments on successive days, and are given instruction as to what they are to see on the way. Outside the plant, the same care in organizing the trip should be observed. An experienced leader should be in charge, the group should be small, and written reports, which will later form the basis for discussion, should be made. The points in which other factories are superior, and in which one's own plant excels should certainly be considered. One large company, which sent a number of minor executives on an observation tour, made several improvements in its own method of administration and production as a result.

Museums, Trade Exhibits, Society Meetings, etc.—The more formal methods of training may be rounded out by the auxiliary instruction which is gained through membership in societies for improving industrial relations; through participation in business conventions; through visits to museums or the study of circulating collections of books and trade periodicals.

Dinners and Clubs.—Club meetings and dinner conferences at which problems are debated have their place in any educational program. Some manufacturers and mercantile houses have for years realized their value in introducing new ideas into the plant. To these luncheons and dinners specialists are invited, and discussions follow the meal.

Correspondence Courses.—Correspondence courses offer another method of training. Under suitable conditions and with the right kind of text books they may be very successful. Their results depend, however, upon a high degree of determination to see the project through. If individuals or a group can take a course with the definite assurance of their executive superiors that their diplomas will count in securing them advancement, there is genuine likelihood that the training will be taken seriously. Indeed, it may often be worth a company's while to give some cash bonus to those who complete an approved course of correspondence study.

Influence of the Demand for Business Leaders on the Colleges, etc.—The demand for business leaders is having a decided influence on the curricula of some colleges and universities. There is a growing movement in the direction of greater unity between business and education, since many of the great Ameri-

can industries have a wide range of executive positions for which college training is practically prerequisite.

The danger in the effort of universities to make their courses "practical" in response to this situation, is that the specialized and technical courses will begin too early in the student's life. The value of a college education for the modern manager is not in the detailed knowledge about industry which it imparts to the student, but in the ability it gives him to handle all problems intelligently, scientifically and with a proper sense of perspective as between economic and human values. Executives who seek to recruit their staffs from the universities will therefore be doing themselves the best service in the long run if they interest themselves in getting good technical courses into the graduate schools of business administration; and leave the undergraduate schools to provide the background of a truly liberal education in which the general fields of history, the natural sciences and the social sciences including, psychology, are covered.

Conclusion.—The training of executives is thus in the last analysis only partially a responsibility of industry. Intelligent leadership in industry, as in the other fields of human effort, is a public asset. It will result in the production of more, better and cheaper goods than we now have; and in a more humanized industrial order. Any educational project which takes individuals who either are or will be in directive positions in industry, and makes them more competent in any way, is usefully forwarding the movement to improve the quality of the administrative life of industry. And until that is improved the program of factory organization and policy which this book is unfolding can never come to its fullest and finest development.

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CHAPTER XII

THE PROBLEM OF FOREMANSHIP

The problem of foremanship is two-fold. It is a problem of function and of individual competency. What is the foreman expected to do? And is he competent to do it? If the answer in many cases is that he is not adequate to his task, a final question is: How can he be made so?

The fact that these questions are being put on all sides at the present moment indicates widespread appreciation of the importance of the foreman's position. Managers are realizing that a company's labor policy is no sounder than the actual working policy of each of its foremen. For it is literally true that in the eyes of the workers, the foreman *is* the company. He it is who embodies and exemplifies in concrete practice, the company's treatment of its employees. Is it any wonder, therefore, that everyone is now expressing concern about the competency and the equipment of the foremen? Production executive joins with employment executive in demanding that the head of every department shall be a man qualified by native ability and by training for the responsible position he has assumed.

The elements of the problem of foremanship will be most readily understood if we undertake a brief examination into the foreman's character and attitude, and into the task he has before him. Little real progress will be made until the psychology of the average foreman is kept sympathetically in mind.

The attitude of the usual foreman is colored by four facts: His success in rising from the ranks; his lack of education; his fatigue; and his effort to overcome a sense of divided loyalty. To rise from the ranks is no mean achievement. It implies more than average physical and nervous energy, ability to "take knocks," technical knowledge, patience, docility, and ability to get work out of people, either by driving or by persuasion. Almost inevitably an attitude toward one's fellow workers creeps in, which is a combination of disgust at their inferiority, scorn at their lack of ambition and pity at their failure to arrive. What has been observed of others is true of foremen: They are

in danger of spurning "the rungs by which they did ascend." One may object that this characterization is overdrawn; but let the doubter really go behind the scenes in the minds of a number of foremen and something closely resembling this complex attitude will frequently be found.

The reason why this narrow attitude may persist throughout life is that the foreman's standards of value are frequently restricted because of lack of education. He has usually left school at the completion of the grammar grades; and there is no one who is so confident in his own knowledge as the self-made man. The fact that he has done thus and so "for twenty years" and been successful is for him the best evidence that no better method of procedure need be sought. It has frequently been observed with truth by industrial consultants in various fields, that the obstacle to changes and improvements come more from foremen than from either managers or manual workers.

There is also a strong element of accumulated fatigue of body and mind that may affect the foreman's outlook. It is only by dint of hard work over long hours with generous donations of overtime and home work that his advance has been made. He is often the first man in his department in the morning and the last to leave it at night. Add to this the fact that too many and too diverse duties are often placed upon him, and it becomes literally true that the foreman is chronically tired out.

And, finally, he has for some time been trying to throw his lot wholeheartedly with that of the company. His fellow workers for reasons that they cannot always voice coherently, but which they feel strongly, have not approached their work in quite his loyal, wholehearted spirit. They have felt instinctively that on certain points their desires diverge from those of the company and give rise to demands for more leisure, more pay, greater security. The foreman has felt this divergence too; but he has suppressed it—has taken the deciding step and become a "company man,"—and he knows from experience only too well the points at which he, as company representative, must try to persuade or cajole workers into conformity with the company's desires. In this situation it is hard to prevent an attitude of mutual suspicion in which foreman and workers are both playing a game to see which can give as little and get as much as possible.

The plain fact is, therefore, that unless the foreman is a remarkable fellow he is likely to be in the wrong mental attitude to deal

with workers. It is not a matter for blame; the foreman is simply the victim in his own field of the rapid growth of the industrial system. His position nevertheless calls urgently for understanding and correction.

The Foreman's Job Today.—But there is another element to consider—the changing character of the foreman's job. The all-around line foreman is still typical, especially in the smaller plants. His duties have been many. He has been expected to fix rates, fix costs, supervise machine installation and repair, hire workers, keep production records, inspect work, train new employees, advise on process changes, and secure the required output. He would indeed be a paragon who in this confusion of duties could be solicitous about the niceties of human relations. Inevitably in the past there has been overwork on the one hand and neglect of important functions on the other.

The pendulum began to swing rapidly to the other extreme, however, several years ago under the impetus of the scientific management conception of "functional foremanship." Instead of one all-powerful foreman, plants which adopted scientific management in modified form created a mechanical department to look out for machine maintenance, a research department to provide formulæ and standard practice, a cost department to figure costs, a planning department to plan and assign the work, a stores department to deliver materials, a personnel department to select and train workers. And the foreman found himself surrounded by specialists who were encroaching upon his preserves in every direction—apparently leaving him little to do, but after all insisting that he administer the plans which they proposed. In other words, although starting out with extensive staff functionalization with the foreman as a mere agent, the movement has been gradually to reinstate him in a position of real importance. The tendency is strongly toward a swing back from extreme centralized functionalization toward a more departmental functionalization which we shall discuss at the end of this chapter.

The point at which many progressive managements find themselves today is one where the degree of functionalization is not altogether clear; where the foreman's job is, therefore, not specific and where his relation to the functional experts of the staff has still to be worked out. Thus no answer to our question, how can the foreman be made adequate to his job, is possible until

we have that job definitely pictured. Then we can answer the question from three points of view. We can tell what the foreman should be, should know and should do.

In other words, we need an analysis of the foreman's job as it is today conceived in progressive plants—a statement of his duties, relations and responsibilities. In the first instance, as a vital part of the education and reorganization of the whole executive staff it will be valuable for the executive (or outside consultant) who has it in charge, to get each foreman to make a written statement of his conception of his job, in which he lists his duties as fully and specifically as possible. This will serve as a basis for comparison but can be considered as nothing more than suggestive since the definite formulation of the duties of any job is one of the most difficult of analytical tasks, one requiring close observation over a period of time to bring it to accurate completion.

The Foreman's Function.—The real problem is to see what the foreman's work is in relation to that of such staff executives as those in charge of planning, efficiency, costs, employment, training, etc. It will probably be discovered that the foreman is in almost continual contact with one or another of these functionaries. Either they are referring to him for information or he to them for advice. But it is usually implicit in the relationship that *he is the man who is charged with the responsibility for running his department*; for seeing to it that the several special methods and procedures installed at the behest of the staff experts *keep running smoothly and effectively*. They are definitely advisory and consultative in function; he is the executive. This by no means exhausts the problem of his relation to them. We return to this question in discussing what the foreman should do.

Briefly, the foreman is responsible for the *coordination of the work* of those under him, with the work of those in preceding and succeeding departments, and with that of the several staff executives. (We are leaving out of account at this time all reference to those few plants where the purely functional foreman operates. This is the "departmental functionalization" which will be discussed later). He is, then, the directive head, the one who ordinarily has the last word in deciding how adopted policies shall be executed. This summary statement of his duties by no means constitutes a job analysis, which should include a statement of the specific knowledge about technique and process

necessary for the foreman, the relative time required by different elements of this job, a statement of the mental qualifications and aptitudes especially required, etc. But this conception of the foreman *as the executive head of a department*, working in close conjunction with a variety of special advisory experts, does define his function in a way which will probably be looked upon as sound organization for some time to come.

With this conception in mind we can proceed to discuss the necessary qualifications of the foreman; what he should be, know and do.

Clearly he should under ordinary conditions be a man possessing qualities of leadership and executive ability. He should be able to give instructions in a way that commands not simply respect but confidence, goodwill and willingness to comply. The necessary extent of his technical knowledge will vary considerably with the industry, but it is surely true that the best workman does not necessarily make the best foreman. Selection of the properly qualified person will be made of course in the light of the job analysis of the foreman's position in each department. But the task of selecting the foreman should be comparatively simple since the selective work should be done at an earlier stage. There would normally be one or two "logical candidates" for the job. It will usually be true that it is from among gang bosses, straw bosses, and foreman's assistants that the material out of which foremen are made is to be found. These lesser executives should in fact be picked with this ultimate promotion in mind. To have them understudy the foreman, and act occasionally in his place when he is absent, will help to make the selective process more sure. The workers who have directive interests and ability will thus tend to come to the front in perfectly natural ways if the foremen and those responsible for training executives are watchful and careful in the advancement of workers to positions as gang leaders and assistants.

Not the least important condition of having the selection and training of foremen effectively handled *is to assign this function to one or two individuals—preferably members of the personnel department*. To be sure the selection of foremen should never be made without the closest conference with the plant-and-process superintendent, since the foremen's duties divide fairly equally between problems of process and problems of personnel. But the work of continually looking about in the shop for

potential executive timber and of giving it encouragement, is a job in the field of human relations.

The foreman, therefore, should be the man in the department who is most respected as leader, who is regarded as the coordinator of the efforts of his associates and the guiding mind of the numerous activities in his room. The personnel department should be responsible for picking out understudies and assistants who are believed to be capable of advancement—and should be active in assisting native ability by formal instruction. It is not unlikely that objective methods of testing intelligence and of comparative rating can help to make these selections less arbitrary and more uniformly successful. We have in discussing selective tests (Chapter VI) dealt with the use of rating scales for executives.

Instruction for Foremanship.—The work of instruction divides itself into two parts: Training the man who is becoming a foreman, and training those already on the job.

As to the first, there is a growing body of interesting and suggestive experience. The method of formal understudy by an assistant foreman is in itself educational; but the assistant's progress will be much faster if his shop experience is supplemented and interpreted in various ways. For example, where technical evening schools are available, he should be encouraged to attend them and efforts should be made by acquaintance with the school's teacher to relate his theoretical instruction and his practical duties as closely as possible. The value of regular class-room instruction for assistant foremen is also great. The subject matter of the curriculum need not differ substantially from that in similar courses given to foremen; and we shall consider the content of the curriculum in that connection. This study should be supplemented by the shifting of the understudy at regular three or six months' intervals from department to department to get a working knowledge of the plant and processes as a whole.

In this training plan, a three months' period in the personnel department may well be included, since one of the most essential points in the success of the prospective foreman is that he have a cordial and understanding relation with that department, and that he absorb and adopt as much as possible of the spirit and point of view with which it works. The employment administrator should consequently aim to have the understudy see

and participate in as many different phases of the human relations work as possible. He may, for example, be required to interview for a month, help in training for a month, help administer personal adjustments and service features and so on. Finally, wherever possible, it is of great value to let the student see the inside of other plants. No one thing can so completely efface the complacency of the man who has always worked in only one or two shops, as to see the different, and often better, methods in use elsewhere.

The training of foremen themselves is happily receiving wide attention today.¹ Outstanding among the methods which are being found successful are the following:

Foremen's classes are being formed which meet *preferably on company time* toward the end of the afternoon, for formal instruction. This instruction is given by a trained teacher, selected first because of his ability to present a subject or conduct a discussion in a clear, orderly and interesting fashion and second because of his acquaintance with the particular industry.

The method of instruction should be one adapted to adults; that is, it should be more a *conference than a class*. The instructor should aim not so much to deliver himself of knowledge as to bring out, organize and make vivid the knowledge which is often to a large extent already present in the group. More ground can be covered and more systematic presentation assured, if well selected outside reading, amounting to not over seventy or eighty pages a week, is assigned.

Classes should be small, containing not more than twenty or twenty-five members. Sessions should be held at least weekly and preferably twice a week, running over a period of fifteen or twenty weeks. It is better to run different courses over a number of years than to work the foremen to the point of fatigue and lack of interest in one long exhaustive course.

Enrollment should be optional, but once enrolled the foreman should be expected to attend regularly. With a little personal work, however, it may be possible to bring practically all the minor executives to the point of attendance.

The subject matter of the curriculum should include the following:

¹ See SLICHTER, SUMNER H. *The Turnover of Factory Labor, 1919*, pp. 380-86, for further valuable suggestions.

- (a) History and development of the industry.
- (b) Raw materials and stores keeping.
- (c) Planning, routing scheduling of work.
- (d) Technique of actual manufacture.
- (e) Working conditions.
- (f) Technique of leadership, handling of workers and other matters of personnel administration.
- (g) Selling and financial problems.
- (h) General problems of elementary economics.

It will be useful to make use of technical experts like buyers, chemists, accountants, etc., to explain their several fields; and to make use of actual first hand data as much as possible. This means visits within the plant and to other plants, the use of moving pictures, models, samples and any other graphic methods of showing ideas at work.

It should be remembered that the foreman, in this suggested arrangement of work, will be able to give time to improving the operation of his department. Yet despite this fact and even after further training, a tendency to passivity is a danger to be guarded against. For a foreman surrounded by staff advisors is likely to assume that they and not he should be initiators, and may thus remain unaggressive and routine in outlook. The dynamic nature of his job can, therefore, hardly be over-stressed in the course of all the educational work. The foreman should be made to realize that he is the one who, if he is energetic, ingenious and imaginative, is peculiarly in a position to see how his department as a whole could be run more economically and more productively. Indeed, the entire educational work of the factory is not to assure that the plant as it is shall run smoothly, *but that it shall become under the creative interest of all those at work a far more effective instrument of production.*

Some plants have found great value in a weekly foremen's conference at which one of the number reads a prepared paper on some aspect of his work and then leads a discussion on it. The shortcoming of this method is that it does not provide sufficient leadership to hold the group to an organized and cumulatively valuable train of thought. It ignores important pedagogical values, which can only be kept constantly in sight where a real teacher is employed.

It may be objected that in small plants this type of educational work, while necessary, would not warrant the full-time use of

a training executive. This may be true, in which case there are two or three possible ways out; cooperate with other local factories to bring in a teacher; secure the service of a teacher on part time to lay out the curriculum and direct the classes; or get local educational agencies to start special foremen's classes in the evening.

No factory is too small, however, to have a well-selected technical library with files of the current technical, and trade journals on hand. The employment administrator should make it his business to see that these trade papers are circulated and read,—especially marked articles of particular value.

The educational value of a foremen's council is noteworthy, but it is an education which comes rather in the doing than by some consciously educational process. We therefore defer its consideration for the moment.

The development of a certain amount of *esprit de corps* among the foremen is also definitely valuable and it has usually to be consciously striven for.¹ The educational work will thus be most fruitful if it is supplemented by a moderate amount of purely social organization. A foremen's club for social purposes only should supply this need. Monthly evening meetings at which congenial and varied entertainment is provided, always help toward the creation of friendly feeling. They serve the legitimate purpose of developing a *sense of fellowship among working colleagues*—a sense at once pleasurable and worthwhile in itself, and productive of greater harmony in the work of the factory. These gatherings should, however, be as autonomous as possible; any leadership which it may be necessary for the employment administrator to exert should be exerted by methods of indirection and personal suggestion rather than by active direction. Nor should it be thought that there is anything dubious about such a method; it is essentially the method of democracy. It is the method which realizes that only as the active and forceful agents in an organization are supplied with good ideas which they submit for popular approval and consent, can progress take place.

Indeed, it may well be said here that much of the most effective

¹ Note in this connection this sentence by Robert B. Wolf: "The only kind of an organization that will have a permanent *esprit de corps* is the kind where the creative power of the individual is free to express his real inner spirit." *System*, v. 35, p. 35. January, 1919.

work of the personnel manager will be done in this indirect way. *He will plant the seed of new ideas in the minds of those who have executive responsibility and then will not be too eager to claim credit for the ideas when the executive or foreman appears several weeks or months later and proposes them as his own.*

There are many variants upon this proposal for occasional social activities among foremen; dinners with the head executives, bowling clubs, theater parties, annual picnics and the like. All can serve a good purpose; yet it is important not to overdo them. It would be most shortsighted for the factory to try to supply the social life, either of its minor executives or its workers. This would be a narrowing experience, altogether too artificial and constricted in the social and recreational group set up.

An increasing number of corporations are finding educational value in relieving the foremen of his departmental duties and using him in the personnel department for a period of three months. Where this department is ably led and is functioning smoothly, such a temporary transfer has benefits for both sides. And the eventual result from the human relations point of view is that all the foremen have helped the employment side of the business to function, and have seen at first hand its problems and difficulties. Inasmuch as the watchword of successful employment administration is not authority but salesmanship, it should be appreciated that the foreman can be better "sold" to personnel work in this way than by any amount of theoretical discussion.

In short, there is a variety of methods but one object; numerous roads but one goal. And that goal is to have foremen in the organization in every respect qualified for the executive responsibilities they are expected to assume. Those qualifications are to be secured not by lamenting over the shortcomings of the foremen, but by taking action to correct them.

And one of the prime correctives must come in *proper organization for the doing of the job itself*. *Executive action can always be educational to the executive, if only he will act after taking counsel with those who have given special problems special study.* In a factory of any size, this can be achieved, at least in the beginning, only by a rather unusual degree of conscious organization among staff and line executives. We come back therefore to our former question: What should the foreman do in order to assure effective administration? But the answer to this involves us in two other problems: First, the foreman's relation to staff

executives, other foremen and workers; and second, the organization of the relationship in such a manner that it is always mutually effective and harmonious.

Foremen and Experts.—The first problem involves the moot question of the relation of the foreman to the expert. We have said above that the foreman is the directive head of his department. But to-day we have efficiency experts, planning experts, process experts, cost and rate experts, to say nothing of the experts in the field of personnel,—all full of ideas for improvements; all anxious to get their ideas installed at once. And at the head of each department stands an executive who nine times out of ten is on the defensive as soon as a new idea is broached. How under these conditions are changes to be affected?

Full answer to this whole question is reserved for discussion in the chapter on the coordination of departments (Chapter XXVI). We shall discuss there especially how the larger staff policies are decided upon and transmitted to the whole organization. We are assuming here that these policies have been decided and that those which remain to decide relate to details of methods. If our discussion seems to imply an over-organization, it should be remembered that this is deliberately done in order to get the several functions and relationships clearly distinguished.

We have already mentioned the foremen's council. This should be the organized body of all the foremen, who meet weekly or bi-weekly to discuss all production matters which affect them. If the training staff or the cost department, for example, have some innovation which the head executives have agreed to back, this should be presented to the foremen at one of these meetings. *But this presentation should usually be preceded by individual conference with all the foremen in their own departments. There is no substitute for the individual contact of expert with foremen, in the course of which the expert tries to "make himself solid with the foremen" and get his idea across. This personal educational work may seem to be prodigal of time where several score of foremen are involved; but progress comes in the wise administration of a factory no faster than it comes in the mind of every individual executive. We are building from the ground up and for all time only as we carry conviction with every foreman regarding changes that are made. Before all organized efforts, then, come personal efforts; and if it proves impossible to*

win assent to a new proposal from one or two particularly hard-headed fellows in private, it may then be useful for them in a meeting to see in what a minority they are.

The value of planting the seed of a new idea and waiting patiently for developments should be clearly seen. The expert who is content to till the soil and then let the earth of itself and in its own good time bring forth the fruit, is the one who gets ahead fastest in the long run. There is a saying which is valuable for the expert to the effect that, *a demand for the exercise of authority is a confession of weakness*. And there is another saying already used in this volume, which is also suggestive for the foreman and expert in this connection: *The expert should be on tap, not on top*. Both of the epigrams stress what we believe to be the vital kernel of truth about the foreman's relation to the expert; namely, that *the expert cannot safely be allowed to put his ideas into practice until there is considerable body of supporting opinion willing to experiment with those ideas and take the consequences whatever they may be*.

The foremen's council, then, provides the representative assembly with which the expert will deal. And it provides likewise the place for adjustments, between foreman and foreman on interdepartmental relations.

In matters of the application of new policies to one special department or operation, further conference with the particular foreman is urgently advisable. Where, for example, as a result of expert study, it is decided that changes in a process are desirable, it will be important to have a regular conference of expert, foreman and representative of workers at the job in question, to go over the ground thoroughly and reach an agreement before changes are introduced.¹

In meeting his responsibilities to the executive above him, the foreman can act competently only when he knows "where he is at"—that is, when he has adequate records. He should, for example, be provided with records of amounts of product per department and per producing units correlated with figures of department pay roll, with comparative figures of unit costs, records of amounts of waste, seconds, rejects, etc., records of department labor turnover, of absence and lateness. Study of these records has of itself such great educational value that the

¹ More extended discussion of this problem in relation to the conduct and use of job analysis will be found in Chapter XIX.

management which fails to provide them, is losing out not only in adequate control of immediate production but in longtime training as well.

It will be especially important, also, for the foremen to have a hand in the determining of personnel policies. A wise scheme of organization includes a personnel committee,¹ which has the work of deciding policies in this field. And on this committee it will be useful for a representative from the foremen's council to sit. This provides a proper *liaison* between personnel and process policies; and means that no innovation is contemplated in matters of human relations which the foremen have not heard of and considered.

This leaves to be considered the relation of the foreman to the workers in their organized capacity. Although this is really a question of the policies of employees' organizations,² there are from the foreman's point of view certain observations to be made here. There is a tendency in the shop committee movement as it is working out practically in this country, to leave the foreman as rather a fifth wheel to the coach. Even in the so-called "federal plan" which makes of the foremen a Senate Chamber, there appears to be some doubt about the vitality of the foremen's part in the structure. It is our conclusion (and is also the assumption on which the most carefully thought out employee representation schemes are planned) that it is usually true that the foremen, as a unit group in the government of industry, have interests which align them more usefully with the management than with the manual workers.³ The practical result of this conclusion is a belief that the place of foremen in employee organizations should be relatively unimportant, and especially that active committees representing the workers should be composed of manual workers only. However, as will appear later, we believe that experience shows that when it comes to important matters on which it is desired that employee groups shall act, the best results are achieved by *joint committees*. On such joint standing committees, the management would

¹ Discussed more fully in Chapter XXVI.

² And will therefore be treated in Chapter XXVIII.

³ Certain unions, however, urge or even require foremen to belong to the union. It is argued in these cases (*e.g.*, printing) that the foreman can so discriminate in the amount and kind of work given out, that fair play is best assured if he also belongs to the union and is therefore answerable to his fellow workers.

appoint its own representatives; and there is every reason why foremen should act as management representatives, provided of course the issue under consideration is not one in which they are personally involved, such as a discharge from their department. By the presence of such foremen as management delegates on standing committees of employee organizations, a point of contact is established which serves an excellent purpose. The foremen and manual workers are then collaborating, each with their special point of view, on admittedly significant problems.

The interrelations of the foremen with higher executives and with workers, affect both groups in so many ways, that our point of view will only be adequately set forth after a reading of the special chapters on coordination and employees' organizations. But enough has now been said to give a fairly exhaustive answer to the question of the foreman's actual duties. He should plan with his experts; schedule work with his subordinates; supervise its execution; study and act upon the records of the department's results.¹ But in and through it all it must be remembered that he touches people at a thousand points. His job fundamentally is to bring people into a relationship and an attitude where an economical production of goods can take place. *His real problem is a psychological one.* And it is, therefore, of first importance that he be the kind of a person who can deal successfully with people. His success is measured in terms of results; but if we can also find ways of measuring his capabilities, either absolutely or comparatively with those of other foremen, time can be saved, friction and ill-will avoided. This is the problem of rating foremen which has been briefly considered in the chapter on selection.²

A further aspect of the foremanship problem is that of pay. The increase in the wage rates of manual workers has in many plants resulted in the foreman's getting less than those whom he superintends. Other questions arise, such as the relation of the foreman's pay to that of the most skilled operator, where the foreman is himself highly skilled and where he is not and does not have to be a skilled worker but is entirely an executive. We

¹ See in this connection the article by MARK M. JONES, What I Would Do If I Were a Foreman, *Industrial Management*, v. 56, p. 59-61, July, 1918.

² For specimen of a foremen's rating scale see Bloomfield, Daniel, Selected Articles on Employment Management, pp. 220-21.

reserve discussion of these questions until the chapter on payment methods (Chapter XXIV).

The question is often asked: How many workers should a foreman have under him? No absolute answer to this question is possible. It depends on the arrangement of the workrooms, the nature of the process, the character and attitude of the workers. If a foreman has too many workers (*i.e.* over 50 or 60) he loses personal touch with them; if on the other hand he has too few workers he is in danger of giving the impression of watching over them too closely. And let the foreman beware of that; let him beware of "snooping around" his department. He is not a detective or a task master, but an executive. And if his capacities of leadership are so inferior that he has to drive with verbal abuse or profanity, or be on hand every minute in order to have work go forward, a successor should be found for his place. In general, therefore, a foreman should have as many men as he can know personally, provided he can at the same time give the requisite supervision, advice and suggestion about production methods, answer the questions which constantly arise, deliver the expected amount of good quality output and have some time to devote to improving his department's efficiency. This would seem to argue in most cases for increasing the supervisory staff to a point where there is one foreman for twenty-five workers. There are plants where the productive efficiency of the individual departments has proved to be in almost direct relation to the increase in the supervisory staff. And this result is achieved not by close supervision of an objectionable sort but by assistance, intensive training and better coordination.

We come, finally, to consider the problem of foremanship where functionalization has proceeded to the limit. There are several plants, for example, where a department instead of having one foreman has three; a mechanical foreman to keep the machinery in good working order; a process foreman to direct the technical work of manufacture; and a personnel foreman to start the employee at work, train him, adjust grievances, etc. These three foremen have to work, of course, in closest cooperation; and if any fundamental disagreement arises among them on some matter that affects all three at once, it is referred to the staff executives over them. For each functional foreman is responsible to his respective staff executive, chief engineer,

technical manager or personnel manager, as the case may be. And it is ultimately for these three to confer and agree before policies or decisions are put into effect.

In this type of organization all the foremen are still dealing with people, still under the necessity of bringing people into relationships and attitudes which are productive. Hence the need for them to be effective personalities is as great as ever. Their knowledge, however, does not have to be quite so generalized—or at least so thorough in every field—as it does in the case of the single foreman. And their duties are, of course, somewhat restricted and specialized. Yet on the whole the problem remains the same; to get people in every executive position who can competently act as the spokesmen of management.

There is a significance in this experiment in extreme functionalization which should not be overlooked, even though it may be too early to say how successful it is and how adapted to widespread use. It looks in the direction of the *decentralizing of staff work*. It looks in the direction of getting the experts into closer, more organic touch with the actual work of production. It takes the coordination of staff departments in a living way into every room and into every situation in the factory. All this has a value which in one way or another must be achieved under any plan of departmental organization. However it is to be accomplished, and there is no room for dogmatism in discussing the methods, it is essential that the different points of view of the plant, process and personnel experts be reconciled and so far as possible harmonized at every point, if the work of production is to proceed uninterrupted. And it is at the point where the foreman is at work that this accommodation has most frequently to be made.

This accounts for the stress which we place upon foremanship as a "problem." We are concerned, as all alert managers are today, to have deft and expert people undertake the direction of each group of workers. This is a *sine qua non* of efficient factory operation. But different kinds of experts are needed. And the foreman is hardly to be blamed for not preserving a proper balance in carrying out expert advice, if managers themselves do not understand clearly the relative weight which each expert should have. He was a practical man who said that as a foreman, "the largest part of my job is human relations."

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CHAPTER XIII

TRAINING THE EMPLOYEE

Productivity, in so far as it depends on human factors, depends upon the way in which human energy is applied and upon the will with which it is applied. And it is an odd commentary upon the fundamental efficiency of industry that so little scientific attention has thus far been given to the work of putting the new employee at once in command of the best technique. Proper training methods are used with surprising infrequency.

Training methods which show the way in which human energy can be applied to best advantage comprise either trade training for craftsmanship or specific job instruction for one piece of work. Positive influences which affect the will to work are reflected in the attitude of the worker which has largely been determined by the early education and outlook with which society has equipped the boy or girl starting into industry.

For administrative purposes the training problem at once divides itself, therefore, into these two major parts: The problem of training young people who are entering industry for the first time; and the more specific problem of training those who are newly entering a factory, or are changing their position within the factory.

The training of those who are to enter industry along lines that will help them to advancement and happiness in their work has never been satisfactorily solved. Each year over a million young men and women find their way into the industrial world and the greater number of them have no preparation for their work or adequate conception of what their work will mean. Reliable figures point to the fact that ten per cent. of the children in this country leave school before thirteen years of age; that forty per cent. have left by the time they are fourteen; that seventy per cent. have left by the time they are fifteen and eighty-five per cent. by the time they are sixteen. "On the average the schools carry their pupils as far as the fifth grade but in some cities great numbers leave below that grade."¹

¹ Vocational Education, Report of the Commission on National Aid to Vocational Education, 1914, v. i, p. 24.

When we come to examine in detail the methods by which new workers are inducted into their work in factories and stores we find a surprising lack of system; and there are many establishments where no formal procedure of training is as yet instituted or even contemplated. The results of this absence of training on the quantity and quality of production and in terms of high labor turnover because of discouragement due to the worker's failing to make good at the process, are naturally serious and constitute a considerable loss to industry.

Methods of Training.—There are three approaches to the problem of training if a well rounded plan is to be adopted. There is the work that the public schools can do; there is the work that can be done in the factory by the corporation; and there is the work that can be done by the cooperative efforts of industry and the community.

Although our attention in this study naturally centers upon the factory training, it is important for the manager to understand the part that the school plays, or should be called upon to play, in the initial preparation of the young worker. For while there can be no absolute line of demarcation, it is increasingly recognized that the school has a primary and distinct function in relation to training. It must train for citizenship; it must give the background for a well-rounded, useful, enjoyable life. But by what means? By general cultural courses or by trade training or by some combination of both? The best current attitude as to the respective functions of public school and of factory instruction has been well stated in the following words of a group of employers in a western city: "Let us give the job instruction; schools must perform the more general service of training in right thinking and character building, and of giving the scientific and academic foundation for specialization."¹

This statement emphasizes in an adequate way the general cultural and non-technical aim which after all must be at the basis of public education.

This distinction cannot be too clearly held in view. For employers are likely to be tempted to urge, as did the employers of another city in the course of an educational survey, that

¹ Summarized from answers to questionnaires sent out to the big business concerns of St. Louis. *Proceedings of the Second Pan American Scientific Congress, Washington, D. C., Dec., 1915-Jan., 1916. Part I: Education, p. 168.*

the greatest need is "a thorough grounding in the common school branches before boys and girls are allowed to leave school. The need of more thorough work in English and arithmetic is especially emphasized. Drawing and manual training of a practical kind are considered important." True and desirable as all this may be from the industrial point of view, it has always to be remembered that life is more than livelihood, that education is more than industrial training, that education for life, liberty and the pursuit of happiness, is presumably an inalienable birthright of American children. And to try to narrow the public educational scheme so that it merely passes on to industry a throng of submissive machine operators would result in a sorry caricature of education.

In the course of receiving an education that really equips them to meet the problem of their generation there is every advantage, however, in children's receiving supplementary trade training. Significant experiments in this direction already exist. And they serve well to illustrate the possibilities and the limits of public trade education. Under present school age laws, trade schools usually take children from 14 to 16 years of age and give training for as much of the two years as the children can be held.

The Manhattan Trade School of New York City is a good example of this type. It is housed in a large, well lighted building, and the instruction rooms are fitted up to reproduce, in so far as possible, the environment of a sanitary work shop. The articles made are for sale, and must fulfil trade standards. The course of study is planned for girls who wish to enter some line of employment as soon as possible. "The majority of these girls cannot spend more than one year for training and provision is therefore made for a course of study extending over one year, with the opportunity for advanced work in any subject if the girl can remain a longer time. . . . About five hours each day or twenty-five hours per week are devoted to trade practice, and the remaining time to related subjects. The instruction is individual, and the girls are promoted as rapidly as their work will permit. A diploma is given to girls who complete the year's course in any one of the following trades: Dressmaking, Millinery, Lamp Shade Making, Clothing Machine Operating, Embroidery Machine Operating, Straw Machine Operating, Sample Mounting, Novelty Case Making, French Edge Making, and Cooking."¹

¹ Announcement of the Course of Study of the Manhattan Trade School for Girls.

In order that the girl may become an all-round, skilled worker her course includes, besides practice in the trade which she elects to learn, lessons in Applied Design, Business Arithmetic and Accounts, Business English, Textiles, Industrial Conditions and Trade Ethics, Physical Training and Personal Hygiene. The students are placed in good positions at the conclusion of the year, and their progress is followed for some time.

This school accommodates, however, but a few hundred students out of the several hundred thousand who are in the public schools of New York. To duplicate this equipment to meet the needs of a quarter of the children that might profit by such training would be very expensive; to determine the ability of the several industries of New York to absorb the new workers would be essential if the plan were extended; to prevent the courses from degenerating into free training classes for factories into whose working forces the children would be rushed, would be imperative.

Training in the Factory.—In short, the work of factory training in the specific content of jobs is not the business of the city. It is the business of industry, and should to a preponderant extent be a charge on industry. It is this business of training for factory work which we shall next consider. Corporation training as now developed may be considered in three aspects: Specific job instruction; training for trade mastery and craftsmanship; general education which supplies the background missed because of insufficient schooling.

Job Instruction.—The work of defining and delimiting the field when discussing the training of employees is difficult because of the looseness with which the terms are now used. The "corporation school," for example, may be used to characterize all educational activities maintained by a concern. But in what respects it differs from a "vestibule school" it is not always easy to discover. In general, however, the term, corporation school, is used more inclusively of all company training procedure. And the term, "vestibule school," applies to the introductory training carried on either apart from or in the workroom. "It is a preliminary training school in which to observe and coach new employees. The vestibule school is to the industrial organization what the vestibule is to the home. In the home it is a place where the entrant stops, wipes his shoes on the mat, adjusts his garments, and performs those duties which prepare him to

enter the house proper. In the factory it is a place which detains the incoming employee until he has become adjusted to a new environment and has been prepared to handle the essential elements of his prospective work."¹

The conditions under which training work may be carried on are, of course, as varied as the kinds of work and of industries which might be considered. Yet if we confine ourselves for the present to the instruction of the new worker in order that he may do his own job well, there are a few general observations which can be safely made and a few common problems which can be stated.

General Problems of Procedure.—Whether training should be in a separate schoolroom or workroom or in one corner of the actual work shop, will depend upon the nature of the work. There are, however, at many jobs which are not craftsmen's work, important values in having the place of training adjoin the workroom. A "production atmosphere" is thus felt from the start; there is the stimulus of seeing the fully equipped workers at their places and of knowing that in a few days or weeks the learner will be transferred out of the training section; there is the incentive to learn quickly which the normal pace of the trained worker arouses in the beginner.

There should, of course, for all training work be special instructors, specially trained. But whether they should be workers picked because of trade skill and ability to teach or be trained teachers who familiarize themselves with the work, it is impossible definitely to say. Both methods are in successful use in different industries.

The training should in any case be carefully thought out from a pedagogical standpoint. The sequential order of an operation is not necessarily the best order in which to teach it. The teacher must reduce the job to its elements and start the learner in on its simplest parts, building from the work he can naturally do easily to the more complicated operations.

The training should be individualized as far as possible. One instructor to not more than every eight or ten workers gives the best results at most kinds of work.

Workers in training should usually work on materials that are going into the actual production. This holds them up to a

¹ LINK, H. C. *Employment Psychology*, p. 273.

quality standard from the start; and increases their interest in what they are doing.

There should be a maximum time limit in which the training must be finished. If after that time the employee does not produce what the average new worker is expected to, his case should receive individual attention from the training director to see if transfer to some other position would help.

Learners should of course be paid while learning; and they must be paid enough to induce them to stay through the discouraging learning period. Many firms make the mistake of giving such nominal wages during the weeks of training that the turnover in this period is excessive. Training is at best a speculative investment for a firm; but the risks of losing the trained worker are reduced if the importance of the investment is seen sufficiently to pay the price at the initial stages.

Wherever practical, learners should be taught several operations either at the start or during the first few months of employment. Ordinarily, if the idea can be established in the worker's mind from the outset, that versatility will pay both him and the company, far less difficulty than now arises will be met at a later date in attempting to transfer him.

Instructors should be allowed to follow up workers for the first few days after they have gone into the production departments; in this way they are assured a more completely satisfactory start.

Cost of Training.—The cost of training work is undoubtedly high, although whether or not the net expense is greater than when employees simply "pick up" what they know, and spoil materials and put machinery out of repair in the process, is doubtful. For job instruction in its narrowest meaning pays in obvious returns of better work and in workers turning out normal amount of production far sooner than otherwise. The time taken to learn an operation under formal training may be a half to a third of the time required to "pick it up."

It is rather when a more elaborate educational procedure of trade and craft training or of general education is pursued that the cost becomes a considerable factor. Of these types of training the following statement has been made: "Of approximately 300,000 commercial and industrial undertakings in the country,

about 600 only appear to have the financial resources necessary to provide even elementary educational facilities for their employees."¹ Although this statement probably understates the ability of each factory to pay, it does point to the need of co-operative efforts and cooperative support.

A group of neighboring factories in the same industry, for example, could cooperate in the hiring of teachers and the provision of equipment. Joint efforts of employers and public educational institutions in dividing the cost of teachers and overhead are also being found feasible.

"In some cases," says a recent report, "several establishments have cooperated in the inauguration of training schools. Such an industrial school has been established in Dayton, Ohio, by four large firms. Both day and evening courses, open to women as well as men, are offered in the operation of the lathe, shaper, drill press, hand screw machine, grinder, tapping machine, turret lathe, punch press, automatic screw machine, hand and power milling machines, and the profile machine, as well as in tool making and mechanical drawing. The instructors are successful journeymen with a thorough knowledge of their trade, who understand actual shop conditions and commercial requirements and who have an aptitude for teaching. In this school a charge is made for instruction, whereas in factory training it is usual to pay a nominal wage to employees while learning. The certificate granted at the close of the course, however, practically guarantees employment to its recipient.

"Another idea which has several times been applied with advantage is the use of a factory that is working only day shifts as an evening school for training new employees. Instructors are secured from among properly qualified foremen of the establishment."²

Examples of Training Procedure.—Each industry, we appreciate, faces special training problems. And beyond what has already been said, brief statements regarding several actual procedures may, therefore, be the most helpful way of indicating possible methods. The educational course of the Packard Automobile Company is an interesting example of the working plans of a vestibule school. Four courses are carried on; one for men, one for women, another for instructors, and still another for job setters and foremen. The average time required to

¹ *Proceedings* of the Second Pan American Scientific Congress, p. 149.

² National Industrial Conference Board, *Wartime Employment of Women in the Metal Trades*. Research report, No. 8, July, 1918, pp. 46-47.

complete the special training is ten days, though some take less time, and others, as in the case of the welder, take more. Sixteen days is the highest. Whenever possible the employee is permitted to elect the type of work which he or she wishes to learn, although the management may have to guide proceedings somewhat if the employee chooses something for which he is clearly not adapted mentally or physically.

Courses of instruction are offered in a long list of mechanical operations; lathes, hand screw machines, milling machines, gear cutters, hand milling machines, many kinds of grinders, welding, inspection, testing, and figuring premiums. A complete record of each student is kept, not only of progress in the school but of the subsequent work in the shop. The cost of the course averages about fifty dollars per student.¹

Some of the conclusions reached by this company, formed as a result of the courses, are worth quoting. "It has been proven beyond a shade of doubt that a more successful body of workers can be obtained through preliminary training than without its aid. This training can be given at less cost, to better advantage, and with less interference with production at a point removed from productive activities." "It should be realized that in the training course, the worker must not only be trained to do the job correctly, but must also be trained physically to do the job easily." "In dealing with large numbers of employees who have little or no conception of the job in hand, we have noticed a strong tendency toward lack of direction in the efforts of the students, and it has been found that success can only come as a result of strict discipline—you must give practically individual attention to each student. Consequently, the instructing force should not be overburdened. We have found that on elementary work the instructor can take care of five students, while on machine work one to three is the outside ratio and one to two gives the best results."¹

One of the most thorough-going of recent experiments in job instruction courses was that carried on by the United States Shipping Board in the training of shipyard workers. A summary of the work, with its purposes and findings has been published, and the brief outline at the beginning of the report gives an excellent idea of the methods and results.

¹ STANBROUGH, D. G. Packard Training School for Employees. *Industrial Management*, November, 1918, p. 380.

The Plan for Shipyard Training Laid out by the Emergency Fleet Corporation

1. "All training of shipyard workers was to be done by the shipbuilders.
2. "Instructors were to be selected by the shipbuilders and assigned for the training of workers in the yards.
3. "These instructors were to be specially trained in the best methods of giving instruction.
4. "Special instructor training for shipyard mechanics was to be conducted by the Emergency Fleet Corporation.
5. "The Emergency Fleet Corporation was to maintain a staff of training experts to help the shipyards in their training activities."¹

The training of the instructors lasted for a period of six weeks. The men were very carefully selected for the course. The department in charge of the training was quite definite concerning the essential qualifications. It requested that the

Prospective Instructor

1. "Should have had not less than five years' experience in the occupation he is expected to teach.
2. "Should have had the equivalent of a grammar school education.
3. "Must be of recognized ability in the trade he is to teach, and show at least some of the following traits:

Patience.

Dependability.

Regularity.

Ability to talk clearly and intelligently about his work.

4. "Preference will be given to men who have had charge of workers.

5. "Preference will be given to men between 25 and 40 years of age.

"In addition to the qualifications noted above, *prospective directors* should have the following:

1. "Must have had experience in charge of men and should have made good as foreman or leading hand.

2. "Preference will also be shown for men who have secured some supplementary technical education by taking advantage of evening school courses, correspondence courses, etc."²

The Scope of the Training Work Conducted by the Emergency Fleet Corporation

1. "The first training center was opened on November 15, 1917.

¹ The Training of Shipyard Workers. Report of the Work of the U. S. Shipping Board, Emergency Fleet Corporation, 1919, p. 11.

² From a typewritten announcement (No. 448) of the Program of the Industrial Training Department, Emergency Fleet Corporation, for Emergency Training in Shipyards.

2. "Thirty-six centers were opened during the year November 15, 1917–November 15, 1918.

3. "One thousand and ninety-eight skilled shipyard mechanics were trained as instructors.

4. "The Education and Training Section was responsible for the actual training of 80,000 men through the efforts of trained instructors.

Results Following the Installation of Intensive Methods of Training

1. "The number of yards for which instructors were trained totaled seventy-one.

2. "Instructor training was given to men of 30 different shipyard trades.

3. "Average number of men trained per instructor per month is 8.55 men.

4. "The average length of training period studied in 21 yards for 20 trades and from the records of 9677 men was found to be 19.27 days.

5. "The tonnage produced by the men trained by the intensive methods of the Emergency Fleet Corporation totaled 498,780 tons or equivalent to 62 ships of 8000 dead weight tons capacity.

The Factors which Made for Effective Training

1. "The instructors who were trained were found to have had an average trade experience of 10.6 years.

2. "In all the yards studied, the training was done on ship material, in the shops or on the ways, no practice work being done.

3. "Segregating the learners on a 'school ship' was found to increase the average training period for five trades in several yards from 25.98 days to 44.62 days and to reduce the number of learners per instructor from 8.09 per month to 6.26 per month.

4. "For the yards studied, the size of the groups of learners under one instructor varied from an average of 7.3 men in one yard to 16.5 men in another. The two yards that produced the men with the highest capabilities averaged 11.1 and 9.3 men in a group respectively.

5. "The giving of instruction in proper sequence was of considerable importance in developing effective training.

"Alternating half day sessions for instructor training was not as effective as full day training."¹

The Cost of Training Men

1. "The average actual cost of training riveters in eight yards was found to be \$24.34 per learner trained."¹

The shipyard experience illustrates many of the most important points to be borne in mind in the organizing of a course of special training for employees. It emphasizes the need for the careful selection and training of teachers, and the qualities that make the

¹ The Training of Shipyard Workers, pp. 11, 12, 13.

successful instructor; it shows the rapidity with which effective educational schemes may be developed; and it indicates the value of small classes. Most interesting of all, however, is the suggestion that it gives for cooperation between factories and plants in other lines of work. It points the way for companies which feel that they cannot support training courses alone, but could perhaps join with others in an educational program.

"Conversion training" is another type of instruction on the job, used by the shipbuilding industry during the war. It takes advantage of a man's previously obtained skill in one trade and prepares him for an allied trade. It recognizes that kindred trades may require such similar types of skill that after a brief conversion training, the trained worker may be equipped to work at several related trades. For example, men who have been employed in building bridges, tanks, and boilers can be used in erecting, bolting, drilling and riveting ships. Such satisfactory results were obtained by this kind of training that the idea is now being extended into other industries.

Training for Trade Mastery.—Training for trade mastery and for craftsmanship has almost been driven out of existence by the specialized machine. Formerly a man entered a trade and made it his life work. Today, occupations have been so divided that a new type of training is necessary to meet the new demand—a training which gives knowledge of the mass of modern scientific facts and familiarity with the complicated mechanism of the machine. Instruction for trade mastery within the shop is thus much broader than training for the job alone. It is the second of the suggested classifications under which existing corporation schools may be grouped.

"Trade knowledge, such as that possessed by all-round, adaptable workmen, consists in the principles underlying the various processes adopted to the trade; the names, descriptions, uses and construction of tools and appliances used; the method of reading drawings and diagrams; the origin, properties, and uses of the various materials selected; elementary ideas on the cost of the product; the importance of avoiding waste of material, time, and effort; the functions of the apparatus and the parts thereof which he assists to manufacture."¹

"This newer kind of instruction for potential craftsmen should preferably be given in a school attached to the works undertaking the training of apprentices.

¹ GARVEY, J. J. Modern Apprenticeship, N.A.C.S., Sixth Annual Report, July, 1918, p. 134.

"There is no reason why even small works should not provide such educational facilities, although the concentration of industries in definite areas undoubtedly facilitates the development of a school serving a number of firms on a cooperative basis."¹

"In a large number of works (in the U. S.), schools have been provided for the education of apprentices, and in many cases training workshops have been added, although opinion is divided as to the merits of the ordinary works or the special shop in training apprentices. Such schools have been established at the Pennsylvania, Santa Fé and other large railway companies, the Westinghouse Electric and Manufacturing Company, the General Electric, Yale & Towne, Browne & Sharpe, International Harvester, Packard, Cadillac and other large works. Instruction is given in a class room for a few hours each week, and practical training is arranged under the supervision of an instructor or foreman. In those cases where a special training shop is provided, an apprentice often spends six months in this and then six months in the main shop, where his new knowledge is applied under commercial conditions; he subsequently returns to the apprentice shop, and learns another process or tool operation, and so on to the end of his apprenticeship. In the General Electric Company, the whole period of apprenticeship is spent in the classroom or training shop, and in the latter he is judged to have attained sufficient proficiency to proceed to new work if he can teach the boy who follows him the process to be mastered. A four year apprenticeship is becoming common in the United States."²

"Today no contract at all is preferable to the legal indenture in many industries.

"A verbal agreement between an employer and a youth that the latter shall come to the works and learn a trade while in receipt of a definite wage is beneficial in stimulating an apprentice continually to satisfy an employer by good work, which is obviously good for the apprentice himself, since if he is unsatisfactory he can be discharged. On the other hand, an employer will always endeavour to keep a good apprentice, and will invariably afford him facilities for obtaining a good trade knowledge since he has the option of leaving at any time if conditions become less tolerable than those obtaining elsewhere."³

The writers of the above paragraphs recognize, however, a number of difficulties in this new development of apprenticeship. They find that the courses are not sufficiently organized; that there is need of standards as to what constitutes a skilled worker; that boys may often be in danger of being exploited at

¹ FLEMING, A. P. M. and PEARCE, J. G., 1916. *The Principles of Apprentice Training*, p. 64.

² *Op. cit.*, p. 102.

³ *Op. cit.*, pp. 118-119.

repetitious work; that more boys are required for actual production purposes than are provided with training opportunities; and that determination of the relative jurisdiction of educators and foremen is difficult.

Another writer¹ offers the helpful suggestion that any firm, employing skilled mechanics, that can absorb ten new employees a year in his organization should have a factory school.

"Shops that cannot absorb more than ten new men a year would have to either train their apprentices in the shop itself—perhaps under the supervision of some workman who is given some time and credit for this supervision—or through a cooperative school organized by several smaller shops. The disadvantage of the cooperative school is the fact that the boy is not constantly under the control of the factory discipline, with the attendant results of less enthusiasm and less loyalty."

Special Training Courses.—In place of the apprenticeship system, some firms are building up what may be called special training courses. They provide for both the new employee and the man already on the job; and generally cover a wide range of cultural as well as practical matter. For example, a large electrical firm has a compulsory course given through a period of two years—several hours a week—on company time, which includes the history and development of electricity, effective speaking, business letter writing, individual efficiency, hygiene and health, company organization, and the elements of psychology and salesmanship.

The objects of such special training may be:

"(a) To train new employees in performing certain duties to which they have been assigned;

"(b) To prepare old employees in the handling of more complicated work; or

"(c) To train all employees in matters of general information."

Other Methods of Instruction Within the Factory.—When concentrated courses are not possible, there are many other methods of educating the worker available—conferences, lectures, organized reading in the library, inspection trips, and suggestion systems.

The conference is being widely used in training the sales force of large department stores, and the buyers' conference offers one

¹ GARVEY, J. J. Modern Apprenticeship, N.A.C.S., Sixth Annual Report, July, 1918, pp. 351-361.

² N. A. C. S., Annual Report, 1918, p. 106.

of the simplest forms of instruction. The buyer is the principal officer, and a weekly meeting at which he lectures and answers questions, has real educational value. Shop committee work, as we shall subsequently see, has its great value as an educational medium.

Lectures.—Lectures in the more formal sense are also worthwhile. Some firms provide halls in which the entire works force may be assembled for talks by buyers on raw materials and markets; by salesmen on the disposal of goods; by experts on technical and scientific processes; and by executives on organization policies and practices. Motion pictures and lantern slides may be used. The man who has seen the operation of the factory devices or the making of the company product pictured on the screen does not readily forget it.

Works Libraries.—The company which has a works library and can arrange for its systematic use, has still another educational force at its disposal. The first element in the success of the works library is the librarian. If he is skilled in the handling of industrial subjects, and understands the psychology of the men about him well enough to select for them just the book or the magazine article that they need, he may become the center of a definite educational program.

The library should contain books of a technical nature which will be useful in the plant; books which tell of health and safety and the problems of management and shop control, in addition to the more general cultural, literary and purely diverting books. In cooperation with the public library of the neighborhood, the shop library can supply many volumes to fill the temporary needs of employees which it could not otherwise afford to provide.

Educational Trips.—Several plants find that the inspection trip both within the factory and to other shops and museums is an important method of training. It at least gives that broad view of the business as a whole which is extremely necessary. One company trained twenty-five of its men from the engineering, finance, and sales departments as guides and with their aid routed the entire working force of thirty-five hundred employees through the plant. The groups were small, and were each guided for three hours. It took two months to give all the employees a personally conducted tour, but when the work was completed it had proved so stimulating that the company decided to extend the privilege to the families and friends of the laborers. About twenty-five thousand more people were ac-

cordingly taken through, and the intelligent interest that was aroused by the whole affair more than justified the trouble. In addition, instead of retarding the processes of production it stimulated them, for during the period when the trips were being made the output was five per cent. above normal.

Other training methods may include the use of exhibits of the product from the stage of raw material to its reception by the consumer.

Suggestion systems will have considerable educational value if administered in such a way that they hold interest and invite ideas.

Correspondence courses, despite their limitations, may be helpful for individuals or for groups who will cooperate in following through a course together.

Training the Disabled in Industry.—There is also the problem of training the man who has been injured in his day's work—the man who has lost an arm, a foot, or an eye. Each year there are fourteen thousand accidents which result in disablement and the average age of these injured wage earners is only between thirty and thirty-three years. Yet at present, although there are in this country not less than 500,000 men and women of working age idle because of disability, little effort either public or private is being made to re-train them.

The Federal Board for Vocational Education has undertaken the task of re-educating the disabled soldier; it aims to see to it that the wounded man is prepared for a new job, in which his health will be cared for, and his special abilities capitalized. Courses are given in the mechanical and manufacturing processes, in poultry raising, horticulture, forestry, cattle raising and civil engineering. Each man represents an individual problem and is given individual treatment.

It is equally practical and desirable to extend this procedure into industry. Indeed we are assured by experts that, "in our highly specialized modern industrial life with its minute division of employment and tasks, it is possible therefore for practically every handicapped man under an intelligent program of vocational rehabilitation to discharge acceptably some task as a full substitute for a normal man. In each individual case the problem is simply one of selecting the right employment and training for it."¹

¹ HARRIS. GARRARD. *The Redemption of the Disabled*, 1919, p. 298.

General Educational Work.—The third type of educational work in industry aims to make good deficiencies in the workers' schooling. Instruction in English is of major importance in this group. Although frequently undertaken as a factory responsibility this instruction is really a public function, and as a practical procedure, factories and schools should probably cooperate in giving it more than is now the case.

The Massachusetts Board of Education, for instance, suggests several feasible plans in which school and industry may combine in Americanizing foreign workers. These plans include one to conduct the school on company time within the works, with public school teachers; another to hold school outside the works partly or wholly on factory time, with public school teachers; and still others to establish a school within the works on company time, taught by factory employees or volunteer teachers; to conduct a school outside the works partly or wholly on company time, with factory employee or outside teachers; and finally to have school outside the works on employee time, taught by approved instructors and all expenses paid by other agencies.

Many companies realizing the industrial advantage of the Americanization movement, are now cooperating in one of these various ways with public schools and educational agencies in giving courses in English and naturalization to their foreign employees. Experience seems to show that the best results are obtained in schools held on company time (or before 6 P.M.); in small classes of one sex which have teachers who know the native language of the workers; in classes which meet at least three times a week (every day is better); and in classes where the same degree of previous schooling prevails among all members.

English instruction is of course only one narrow aim of these general educational courses. Civic classes for those who are anxious to become citizens are also provided. In some large corporations the scope of the training becomes so broad as to be in effect a whole scheme of university extension courses.

Continuation Schools.—It remains to consider only the present developments of training in which industry and the public schools cooperate. Public schools which take children from 14 to 16 years of age during part of the time while the factory takes them during the rest of the working hours, are called continuation schools. In some cases the children leave industry for eight or ten hours a week for class work in the school. And under

another arrangement they alternate one week in the school with one week in the factory.

The possibilities of such reciprocal relation between school and industry are great, especially if the proper joint administrative machinery is instituted. Control of the selection of courses and of their content cannot wisely be left to any one group. There should be joint action of employers, organized workers and educators on all problems of industrial education, and expense can on this basis be wisely shared between industry and community.

There seems to be wider and wider consensus of opinion that it is in this direction of joint supervision and joint support that progress in industrial training can come. The limited task of job instruction is only one aspect of the problem. The work of more general equipment, the work of broadening and deepening the understanding and capacities of all children from 14 to 18 years, is the more basic task. And to undertake it in any adequate fashion requires a cooperative effort as yet hardly imagined.¹ The difficulty is not merely that managers have failed

¹ The plan outlined below for Sweden is the sort of procedure that begins to cope with the problem:

"Sweden, of course, like many other nations, is feeling the lack of really skilled workmen, and is beginning to recognize, further, that the really skilled workman, unless he is at the same time a well-educated workman, is not the valuable industrial asset he might be. And so the plan proposed to the Municipal Council of Stockholm by the Board of Industrial Schools provides, at every stage, for the general education of the apprentice, side by side with his technical education. Indeed, the work of general education has a very prominent place in the scheme right up to the time when, as a young man of nineteen, the apprentice emerges from his last course of instruction in the trade school a fully equipped artisan, mechanic, or what not.

"The work of training the new apprentice really begins with his last year in the elementary school. During that year the pupil will have the opportunity of determining, through the help afforded him at the apprenticeship school, what special work or craft he desires to take up. When the time comes to 'leave school' he will have made his choice, and will be encouraged to secure a position in any minor capacity, such as errand boy or office boy, in such trade as he may have chosen. In this way he will gain some insight into the business, whilst attending, for a certain number of hours every week, extension classes conducted on the broad basis of general education. The following year he will apply for admission to the preparatory industrial school belonging to the

to see the value of factory training; it is that the community at large has been inclined to stand baffled before the project of equipping hundreds of thousands of children for life in an industrial world where scant call was made upon their talents or enthusiasms.

Training the employee is in reality the work of organizing the factory life so that individuals who have some native versatility, some natural creative interest and desire to be useful and to associate, can find satisfaction in their work.

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trade he has chosen. Here he will be instructed for six months in the theory and practice of his trade, whilst, at the same time, he will continue his attendance at the extension school. After passing through this stage successfully, he will receive, through the employment agency connected with the school, a suitable position as apprentice, and during all his years of apprenticeship, he will continue to attend his trade school for one whole day in each week. He will not, in fact, finally leave school until he is nineteen, and, even then he may, after he has served his time in the army, return to school again and take the 'foreman's course.'" *Christian Science Monitor*, Feb. 13, 1920.

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CHAPTER XIV

THE COMPANY MAGAZINE

The company magazine, or house organ, is the medium for the democratic collection, evaluation, and distribution of information concerning the lives, purposes and hopes of the people in the shop. It may profitably occupy an important place in any program of employment administration. In the small plant it can intensify a feeling of common knowledge and understanding. In the large plant it can help substantially, if properly administered, to bridge the distance between management and men; it can foster cooperation and friendship; it can help to clarify to managers the desires and purposes of the workers and convey to workers something of the problems and purposes of the management.

Need of Company Paper.—There are several factors that contribute to the value of a plant paper. In no country is the average worker more generally accustomed to reading a variety of periodicals than in the United States. Most of his information on important subjects is gathered from dailies or weeklies; and his habit of reading offers a sound foundation upon which to build a shop paper that can give a constructive interpretation not only of shop problems but of wider public affairs.

Within the plant the need for common knowledge is great. The awakening of friendly interest in fellow employees and in the management, the tying together in fellowship of the various departments and branches, and the establishing of cooperation between the community and the factory, all these desirable ends may be furthered by the company magazine. In industries where personnel work is fairly well established, and where the functions of employment and maintenance, factory hygiene, research and training are centralized, the value of a magazine is especially great. The health program which operates to anticipate and prevent occupational dangers and illness, the shop committee arrangements, and the educational courses set up and directed in order to discover and develop the creative interests of the workers—all find an opportunity for interpretation.

Types of Company Magazines.—Company magazines may be divided into three distinct types: Those managed almost exclusively by the company; those directed by employees; and those operating on a cooperative basis, that is, controlled by both employers and employees. The majority of house organs published today belong to the first class. They are generally an adjunct of the advertising department and advertise the product of the company rather than forward a broad educational policy. They are “issued in the interest of” everything from roofing tin, abrasives and lubricating products to “concrete roads, streets and alleys,” and their mailing lists consist largely of actual or potential customers of the firm and friends of the management. To these publications employees are sometimes permitted to contribute personal items and educational articles, but the magazines are designed primarily to sell goods and are therefore written by special publicity agents.

There are comparatively few shop papers managed by the employees alone. Of these the majority receive financial support from the firm, and the remainder pay their own expenses by charging a small amount for each issue, and by the insertion of advertisements. Their contents are largely personal notes, short stories and jokes about members of the working force, and while they do a valuable service in promoting fellowship and goodwill between departments and branch offices, they often lack any clear purpose or policy because there is no contact with the several divisions of the personnel department which could help to make the organ a positive force.

The third type of magazine, which is operated under the direction of both employers and employees, is the one which under present conditions usually has the best chance of becoming a genuinely cooperative instrument. It is to be found in but few plants, and the joint control of management and workers is effected in various ways. In some cases, the journal is published by and for the employees under the supervision of the personnel department, or one of its administrative divisions. Sometimes, it is controlled by a Board of Management on which the employees and the company have an equal voice, and sometimes by a club composed of workers and representatives of the firm. In no case has a well-rounded cooperative magazine been evolved. A shop paper of this third class encourages growth in the capacity for cooperative action and offers a definite medium for its practise.

Hence, the values that it may have for a company outweigh the possible inconvenience and mistakes which joint control may bring.

The Editorial Staff.—How should the editorial staff be selected? The editorial staff in the truly democratic shop paper would have the approval of both the rank and file and the executive force. It would be composed of an editor-in-chief who is experienced in journalism and knows what the workers want, with perhaps an assistant editor; both to be chosen by the management with the endorsement of the employees' cooperative associations or shop council. Both of these would in a large plant have to devote their entire time to the magazine, and one or the other should have sufficient artistic sense to enable him to select and arrange illustrations. The members of the entire force, managers as well as laborers, should be encouraged to contribute both literary and artistic material. And the factory news should be collected by men and women appointed from each department. Some firms call for volunteer reporters, while others ask the foreman to select the candidate. It seems better, however, to have the news collector elected for a period of perhaps three or six months by the members of the department which he represents.

The editor-in-chief, his assistant, and the departmental reporters constitute the Magazine Board, which meets regularly for the discussion of policy and the selection and criticism of material. The head of the personnel department may act in the capacity of advisory editor and review the paper before it goes to press.

Contents of the Magazine.—The success of the company paper will of course depend upon the universal appeal of its contents, and the manner in which they are selected and set up. There is no value in a paper unless it is cordially accepted and systematically read by the people. First of all the editors should ascertain the kind of magazine that the workers and the management would like, and then, in joint discussion, determine the type to be launched. While such a canvass would doubtless reveal a wide variety of preferences—one editor says that they embrace everything that has ever been written in any magazine in the world—it would probably be true that the majority would desire a journal which includes factory news, stories and instructive articles that relate to the business and current events, exchanges, educational, athletic and health departments, editorials, and columns of value to the families of the employees.

Factory News.—Most men and women in industry are more interested in the Factory News Department of a paper than in any other. Factory news is a broad term. It comprises personal notes on the daily activities of employers and employees, the current business events of the plant, and the happenings in the community that are related to the life in the factory.

Friendship with fellow employees and with the management is promoted by the personal section of the factory news. Its subject matter is made up of all the varied happenings in the plant's daily life—humorous incidents, promotions, organization changes, honor rolls, returns from sick leaves and from vacations, and the scores in the factory athletic contests. A successful shop paper reporter writes:

“If any reader has taken a vacation, married, returned an umbrella, paid back a borrowed dollar, bought a horse, automobile or baby carriage, planted a war garden, built a chicken house, robbed a baby's bank, made a speech, been reduced, promoted, received a raise, won anything, done anything, been in a fight, we're glad of it, because that's news.”

When, as in large industries, there is need of a “get acquainted” campaign, short biographies of the lives of the members of the management and of the oldest employees, in the order of their seniority, may be written. In each issue of the magazine the story of one of the executive force and one of the workers may appear. “Guess who” contests are popular. One paper has a written description of the men, which pictures their physical characteristics, and the position which they hold; another publishes snapshots; still another procures photographs of the employees which were taken when they were babies and accompanies them with a humorous write-up.

There is one personal note that always claims the attention of any working force. Nothing appeals to the average man more than his babies. Most of the company magazines recognize this fact, and print all kinds of reproductions of proud parents and their children. Often there is a section of the paper devoted entirely to this phase of factory news.

The sports and recreation of the workers form another important topic. The scores of the football, baseball, basket ball, cricket and soccer games are interesting to the whole plant—especially if the fine points are cleverly explained by write-ups,

cartoons, and snap shots. Descriptions of boxing and wrestling matches, track meets, swimming contests, and tennis tournaments between departments and with other firms make absorbing reading, while the incidents on hunting, fishing and automobile trips, picnics, and "hikes" may be the basis for amusing stories.

Not only may friendliness among the individual employees be aroused by the company magazine, but inter-departmental interest may also be stimulated. Recently, for example, "The Telephone Review" has published four monthly editions, each one of which has been placed in charge of one of the four departments of the New York Telephone Company. The September, 1919, number was issued by the "Commercial Department," which selected its own corps of editors and solicited articles from the members of its own staff.

Current events in the business life of the plant are properly factory news items. New machinery, additions to the building, a large consignment of work, all deserve mention. An innovation which effects the lives of the workers creates doubt and uncertainty unless it is explained, while men who have worked day in and day out on some minor portion of a big job need the stimulation which comes from hearing what happens to the completed product. One firm which builds airships tries always, when a machine is completed, to publish a short description and a picture of it in action in the shop paper.

Outside the factory, as well as within, events occur continually which are of importance to the members of the plant, and useful contacts with the local recreational, educational, and health agencies can easily be made through the company magazine. The Factory News Department can tell of opportunities for wholesome amusements in the neighborhood; it can describe the gymnasiums, the parks, and the nearby country resorts, and it can print notices of the library facilities, and of boarding houses and clubs.

Editorials.—Factory news has been discussed as of first importance because in the present stage of plant development it is the feature which is most interesting to the largest number of workers. It would seem that, in a democratic company magazine, the Editorial Department, if it is conducted in a spirit of cooperation may be made to have the next appeal. It may reflect the ideals of the entire works force—the management and the rank and file, and it may be so directed as to interpret issues of large significance

which affect the welfare of the whole organization. "It can present the trials of the worker and the tribulations of the foreman over him. Let some of the men talk about bosses, criticising them if criticisms are just. And let foremen write about their experiences with unreasonable men. It can persuade some of the radical groups to reveal themselves in the organ. These men make the worker think. He needs to think. Ideas are never dangerous when they are expressed in the same context with other and different ideas. The editor can swat their arguments if he goes about it in a pleasant and intelligent way. The plant organ can discuss the trade union if the editor knows the subject. In fact, there should not be a subject that is a matter of concern to the working folk that it should not be free to discuss."¹ Here, if the enthusiasm of all can be aroused, the leadership of the entire factory, whether it comes from the departments within or from sources outside, is aroused and developed.

Stories and Instructive Articles.—The Department of Stories and Articles should also be open to all the writers of the plant, and contain narratives, instructive articles' descriptive of the business, and of employees, and employers' association meetings. Several company magazines even include a poets' corner.

The character of the stories to be published in a plant paper is always a problem. One firm, in answer to a questionnaire on the subject received some instructive replies. 47.6% of the employees wanted articles about the heroism of workmen during fire, flood, and storms. The deeds of war veterans would come under this head. 31.2% liked stories which treated of instances of courtesy, and of thoughtfulness on the part of those in positions of authority. 7.5% wanted articles on efficiency and training, while the remaining 13.7% had desires too widely divergent for classification.

Articles which tell of the development of the firm and the history of the industry in which the company is engaged belong in this department. A large rubber company, for example, has run a serial which tells of the manufacture of rubber from the beginning to the end. Another began its first number with an illustrated popular account of the growth of the business. Still others print descriptions of travel which picture the country from which the raw material comes and the use of the product when it is finished.

¹ PARK, ROBERT E. *The Plant Organ*. U. S. Department of Labor, Division of Labor Administration, Circular No. 5.

Résumés of labor laws may form another important part of the informational section. The making of laws, their administration and interpretation must be brought to the attention of the industrial world; and daily press and popular magazines do not carry the message directly to the shop and home of the average worker. This does not mean that the shop paper should become a substitute for the newspaper, but there are certain phases of the law which influence the lives of particular groups of workers and which can well be interpreted to meet their needs through the medium of the company magazine.

Educational Department.—The workers who desire articles on efficiency and training should certainly be catered to in the company magazine. In it may appear short explanations of technical processes, new methods and machines. In some shop papers these form the entire contents. The educational courses offered by the plant and by the community may also be announced and explained, and firms that have their own libraries may give an account of the special exhibits and new books. One company magazine prints a monthly list which classifies the books and articles that should be read by executives, by foremen, and by departmental workers. Perhaps, too, the educational section is the place in which to include mention of the awards for suggestions. Every valuable constructive idea might well be acknowledged in the magazine, and comment made as to why it is or is not to be put into effect.

Health and Hygiene.—Where a personnel department has doctors and nurses on its staff, where foremen are being trained in accident and health work, and where campaigns by means of bulletins, motion pictures, shop talks and lectures are being carried on, the company magazine should also be utilized to promote health and safety. "One concern found that in one year its employees lost 1,355 days because of accident. It now publishes in its shop paper a series of 'Safety Hints.' Each month, one safety-first plan is discussed in detail. The result of this plan is that the number of days lost each year has been cut down to 260 and only part of this number is caused by accident."

Housewives' Column.—Some company magazines attempt to make the women in the homes of the employees feel that they are an integral part of the whole organization, not only by asking for news contributions from them, but by maintaining a column for their special benefit. Favorite recipes signed by

the cook, economy devices, and all kinds of household hints are published. Want and for sale advertisements printed without charge are also of practical value. The Housewives' Column may make the shop paper of real service in the home, and be a good reason for its not being thrown into the waste box at the plant.

Cost and Make-up.—The make-up of the magazine as well as its contents depends largely on the amount of money that the firm or the employees have at their disposal. In the long run, however, the best that can be afforded pays. In size, the company magazine should be a convenient one to handle. Those of today range from 4 × 7 inch booklets to 13 × 15 news sheets, and from four pages to forty. The 4 × 7 booklet may readily be tucked into the pocket, but it is not big enough to permit the use of artistic illustrations, while the larger papers, unless they can be folded, are too bulky.

The magazine title should be distinctive and should have some connection with the industry. The "Fore River Log," "The Morse Dry Dock Dial," and the "Hydraulic Press" are, for example, well chosen. A decorative cover also helps to give an attractive first impression, though plain printing is better than poor art if a color design is beyond the means of the paper's supporters.

The illustrations are as important a feature of the magazine as are its literary contents. Most of the information that influences the majority of people comes through the eye; certainly much of the interest in the shop paper is centered about pictures. Most of the journals use simply photographs and cartoons. Within the plant there may always be found several workers who have decided talent as artists, and who are glad to contribute their drawings. Photographs, however, make the magazine of lasting value as a record of the daily life of the plant.

Company magazines are generally published once a month. Some firms have a large monthly and a four or five page weekly edition, while others issue a newspaper, or special numbers at times of anniversaries or when current events of universal interest to the plant are taking place.

The item of cost is important. Most firms that publish a successful company paper are emphatic that it is a paying investment. The average cost of a single copy of a company magazine ranges in the larger concerns from five to ten cents.

One company, which publishes 30,000 copies a month, finds that the cost is 7.79 cents a copy. Another estimates that in 1917 it printed 29,000 copies a month at slightly less than ten cents a piece, and, in 1918, 43,000 copies a month, with thirty-five pages of reading matter and an especially designed cover, at 9.13 cents. Still another firm that distributes 30,000 copies a month, at 9.7 cents each, itemizes its yearly expenses as follows:

Printing.....	\$16,580.63
Distribution.....	4,123.11
Salaries.....	6,645.00
Cover color plates.....	1,870.62
Sketches.....	963.45
Photographs.....	845.63
Cuts.....	1,785.90
Rent and house service.....	883.25
Miscellaneous.....	1,560.50
	<hr/>
	\$35,258.09 ¹

Such a budget is of course out of the question in a plant where the circulation is to be less than 1000 or 2000. In the case of these smaller plants the cost is kept low by having the editorial work done by members of the organization, by eliminating color press work, by charging employees a nominal sum like five cents for the paper.

In several cases, the cost of publication has been materially reduced by setting up a printing establishment in the plant itself. Where forms, records, labels, advertising matter and reports are used in considerable number and can also be printed on the same presses, the expense of printing the magazine may be reduced fully one-third. One factory, which installed its own printing department, found that the cost of the printing for the entire plant did not total as much as the previous cost of the magazine alone.

Whether the firm should bear all the expense or the employees should share in it is a question. It is the conviction of some of the best personnel executives, however, that the publications should be sold rather than given away. A concern which issued a paper gratuitously for several months found the ground about the plant strewn with it. When a few cents were charged, the subscribers were far more careful. And certainly no better test of the employees real interest in the magazine can be de-

¹ *Factory*, v. 22, p. 486, March, 1919.

vised than their willingness to buy it because of value received. Yet some of the most successful magazines have not had any difficulty with a free distribution, especially when the paper was mailed to all who sent in their addresses.

Wisely directed, the company magazine can help significantly to improve the human relations. It provides a valuable opportunity for cooperation and it may be made one of the strongest educative forces of the plant. The job of reporting, in itself, if it is rotated, may develop in many men the knowledge and goodwill which comes from friendly contact and the judgment which results from the discovery, the selection and the evaluation of important facts. It encourages both artistic and literary talent, and is a helpful incentive to induce the non-English speaking groups to learn English. It is a medium to foster the desire for intelligence and for a broader understanding of the common interests between executives and workers.

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CHAPTER XV

AROUSING INTEREST IN WORK

Much has been written about the monotonous character of present-day industrial work; and much is now being written about the workmanly, manipulative, constructive, creative impulses which appear to be a native part of human equipment, and of which, it is claimed, little use is made or can be made in the average factory. Industry is under indictment on the serious count of failing to provide any reasonable outlet for certain fundamentally necessary and useful tendencies of the human organism. It is accused of cramping and stultifying the individual; of making it impossible for him to find interest and fulfillment of life in work.

Certainly no more serious situation could be conceived than one in which millions of people are destined to be confined for eight or nine hours of close application, to labors which are indifferently or even grudgingly performed. It is hardly an exaggeration to say that the permanence, productivity and humanity of any industrial system, stands or falls in the last analysis upon its ability to utilize the positive and constructive impulses of all who work,—upon its ability to arouse and continue the interest of the workers. The problem, therefore, demands searching study if we are to answer such inevitable questions as: Is interest in work as now carried on possible? If it is possible, how is it to be aroused? If it is not, how can we so modify conditions that interest will arise?

The question of interest in work is an intensely practical one. The fact that much of the discussion of it has bordered on the sentimental need not disturb us if we will preface our study with a careful analysis of the concepts of "interest" and of "monotony."

People are interested when an activity tends to keep occupying the attention—that is, absorbing them by some appeal either of its difficulty, of downright enjoyment in its performance, of approbation of one's fellows because of proficiency, or of some other significance in the activity. People are interested when attention has passed the point of conscious effort and becomes

eager, immediate and, so to say, spontaneous. Attention can be so commanded when we are *actively* engaged, have a *definite object* to attend to, and recognize *something at stake*, "something whose outcome is important for the individual."¹

A display of interest is therefore a display of "self-expressive activity." One is interested when one can register in the activity—in terms of self and group approval,—register in the doing and in the result. And that sense of self-satisfaction can grow only as the root desires of the individual are being realized. What those root desires are, we have already considered. We want to and we must register in terms of manipulation, workmanship, creation; in terms of group conformity and recognition, of emulation, and curiosity. Wherever, said William James, a process of life communicates an eagerness to him who lives it, there the life becomes genuinely significant.

Important elements in a condition of interest are therefore self-choice of the activity, pleasure in its continuance, a sense of significance and value in its performance, and opportunity to secure the approval of one's associates.

A condition of monotony exists where these elements are lacking. Remove the chance for self-choice of the action, for understanding its significance, for having the approval of one's fellows, and the labor is sheer drudgery. "Monotony means that growth, development, have ceased."² Monotony is present when work has become so habitual as to be automatic, (that is, it is making no demands upon the active attention); or when work is found to be temperamentally uncongenial, or is thus for any reason precluding the chance for self-expression and development through the work.

If these definitions are correct, interest and monotony are not characteristics of certain kinds of work. They are characteristics of people in their reaction to work. A job is not inherently interesting nor inherently monotonous. It is interesting or monotonous *to a worker*. There are inevitably these two aspects contributing to create the one fact of the worker-in-his-relation-to-his-work. The two must in each separate case fit; the worker must find the job that satisfies him. He must be able to register there; and in order that this may happen it must fit from

¹ In this whole discussion we recognize our debt to PROFESSOR JOHN DEWEY's Interest and Effort in Education. See p. 16.

² DEWEY, JOHN, *op. cit.*, p. 36.

the point of view of the opportunity *for him*, in relation to his capacity, and in relation to his motives and desires. It is, in short, a dynamic and changing fact. The worker is either progressively more interested because the adjustment is always improving; or he is progressively less interested—and usually less capable of being interested in the work.¹

Jobs as jobs, therefore, are neither interesting nor the opposite. It all depends on the relationship between individual jobs and individual workers. But there are, of course, jobs which because of their simple content do quickly become habitual and then automatic. Any prolonged performance of such operations will, of course, become monotonous and whether or not these jobs as now constituted can of themselves be interesting is in our opinion a grave question. The possibility of developing a derived interest for this type of work must be considered.²

But there are many jobs usually thought of as monotonous, which require thought, care and attention, and could therefore be much more interesting than they are, if only the worker had the knowledge, ability, aptitude and background, out of which interest would normally arise.³

¹ See A Point of View in the Field of Industrial Personnel, The Scott Co., Laboratory, June 24, 1919.

² Suppose, for example, it is true, as an able psychiatrist recently remarked, "The feeble-minded make the best machine feeders." Are we to draw the obvious conclusion as to standards of selection for machine feeders? Or are we to say that where the worker does "mind" the machine (significant expression), and no special mental fitness is required by the immediate claims of the job, we shall attempt to compensate for this restriction by other activities—within industry, if possible; and outside it, if this is not possible?

³ An interesting illustration of this is given by F. H. Selden, *Have We A Just Standard of Industrial Intelligence?* In *American Journal of Sociology*, May, 1919, v. 24, p. 646. "Usually, only cheap help was employed at this machine, as the foreman prided himself on getting work out at a minimum of expense. The regular hand quit and it was necessary to put another man in his place. The new operator looked the machine over, fixed it up, and decided to run it on a faster speed. To do this he must watch it very closely. . . . This necessitated his keeping his ear close to the cutter. Being a tall person, this could be accomplished without undue fatigue only by sitting down. He got a nail keg and sat close to the machine, but as his ear was directed toward the cutter his eyes were apparently looking about the room. Only a day or so elapsed before the foreman called him down for his lazy tendencies in sitting at his work. This, of course, resulted in his putting his machine back on slow speed and assuming an attentive attitude."

This points to a fundamental need—the need for analysis of the *intellectual content of jobs*. From the point of wise selection of workers, promotion, transfer, modifications in process and training, we need more exact data as to what qualities, aptitudes, traits of temperament and technical knowledge each job demands. Such study, we can confidently predict from all the job analysis which has thus far been done, will reveal an astonishing amount of special skill required at many supposedly monotonous tasks.

Such study will, moreover, tell us how many jobs of each different kind there are in a factory. We know that it is inaccurate to speak of all factory work as repetitive drudgery. The work of machine maintenance occupies some workers. The handling of materials and trucking occupies others. There is assembling, inspection, packing, shipping. The actual proportion of unskilled machine-feeders varies from plant to plant; but apparently it runs between forty per cent. and eighty per cent. We must not ignore the fact, however, that the elements of insecurity in the job, non-control over work, little significance in the work, little chance for fellow workers' approval, may all be present at repetitive and non-repetitive jobs alike, and that monotony exists wherever the chance to make the job one with one's self is no longer present.

The Worker's Attitude Toward Interest.—Our discussion of methods of arousing interest in work will be clearer if we consider next two important objections to any definite effort in this direction. It is said, first, that workers seem to like automatic jobs; second, that they don't want to be interested in their work. Both points have such elements of truth in them that they deserve careful scrutiny.

There are at least two important reasons why some workers seem to like automatic jobs. The job must, of course, always be seen in relation to the individual's capacities and to his desires. The capacity and desire of a given worker is determined by many factors. But second to none in significance are the factors which moulded his life and outlook from birth to his fifth or sixth year. A childhood spent in the restrictions of a tenement environment with its precocious developments in some directions, its enforced repressions in others, its complete effacement of certain qualities and values, may well create a mental life which is incapable of securing the normal responses. "Repression," it has been thoughtfully said, "often expresses

itself very strikingly in the decrease of such emotions as have been present and the non-appearance of expected new emotions."

The repression may be an infantile one; it may be due to long years of dull, unpromising work. But the fact remains that individuals are responding to stimuli in a pathological way when they are content with automatic jobs.

Again, this repression may be invited and continued because of the habits and attitude of the surrounding group. John Stuart Mill gives an accurate characterization of much working class behavior when he says,

"Even in what people do for pleasure, conformity is the first thing thought of; they like in crowds. . . . until by dint of not following their own nature, they have no nature to follow; they become incapable of strong wishes or native pleasures, and are generally without either opinions or feelings of home growth, or properly their own."

In other words, lack of interest breeds lack of interest, until a situation arises wherein it may actually be bad form to like one's job.

There remains the second objection that workers do not want to be interested in their work. Where this is the case, it is often true that habituation to drudgery has led to a more or less unconscious conclusion that work cannot be interesting. Many older, habituated routineers undoubtedly hold this conviction; the hope is with the younger, less fixated groups.

It is indeed hard to visualize the outlook and environment as it may present itself to the worker.

"It is," says an observing economist, "not sufficiently considered how little there is in most men's ordinary life to give any largeness either to their conceptions or to their sentiments. Their work is routine; not a labor of love, but of self-interest in the most elementary form, the satisfaction of daily wants; neither the thing done, not the process of doing it, introduces the mind to thoughts or feelings extending beyond the individual; if instructive books were within their reach, there is no stimulus to read them; and, in most cases, the individual has no access to any person of cultivation much superior to his own. Giving him something to do for the public supplies, in a measure, all these deficiencies. If circumstances allow the amount of public duty assigned to him to be considerable, he becomes an educated man."¹

¹ MILL, J. S. Representative Government, Chapter III.

There is, finally, the fear of exploitation if interest in work is pushed to a point where the employer gets a much larger proportionate return for increased product than the worker. There is reason for this fear; and no manager who wants to introduce a thorough-going program to secure interest can neglect to recognize the place of rewards in the scheme of incentives. To stress, as some have, the phrase "non-financial" incentives, is almost to prejudice in advance the case for greater interest.

To be sure the sole and primary incentive to interest and effort is not the pay envelope. The most deep rooted incentives are non-financial. But that does not argue for any ignoring of the financial considerations or of the necessity for doing justice in the matter of income distribution. The arousing of interest is not synonymous with efforts to "speed up" production, to cut wage rates, to increase profits. At that moment when workers feel they are being tricked into interest in work in order that their employer may get added returns, the game will be up with the employer. *Hand in hand with the development of methods of stimulating interest in work, must go methods of decentralizing control over process and over earnings.* How this may be done we are considering in other chapters. The immediate point is that the creation of interest in work is not a Machiavellian enterprise in which something can be given with one hand and taken with the other.

In short, the efforts of the employment administrator to make work interesting are, if they are intelligently pursued, neither disruptive of morale nor exploitive in character. In stimulating interest we are endeavoring to hasten an educational process which shall simultaneously arouse discontent with a meager, narrow life and provide channels for securing the permanent satisfactions of a life of wider outlook and constant growth.

Because this is an educational process, it is not calculated to disrupt the whole scheme of workers' habits and outlook so that they are without stability. Nor is it necessarily calculated to stir up longings which cannot be satisfied, nor to let loose impulses and desires which are anti-social in their manifestations and consequences.

To create interest in work means rather to make work contribute to the upbuilding of personality; it is to attempt to restore a greater unity to life, and remove the present wide gulf between work and pleasure, between the getting of a livelihood

and the living of a life. To create interest in work is thus a fundamental part of the educational function of the factory. And there are practical methods by which this education can be undertaken.

These methods are discussed in the remainder of the chapter, not on the assumption that any one plant can or should necessarily adopt them all; but because together they offer a program of action in a campaign of securing interest, which is comprehensive and worth working on over a period of years. It is not a problem which can be solved by cure-alls; a balanced plan is essential.

Regular and Permanent Work.—The time has come for managers to admit that they cannot expect interest from workers whose jobs are constantly uncertain. It is humanly impossible to expect a degree of loyalty in a situation where the tenure of employment depends almost entirely upon the foreman's or manager's pleasure, or even upon the state of business. There is no premium on conscientious, willing and skillful work, if good and poor workers alike are subject to the unforeseen lay-offs and discharges now unfortunately so prevalent.

This is not the place to propose methods for regularizing employment.¹ But it is very much in place to call attention to the psychological impossibility of fostering interest in work while there is no security of employment. It is, for example, a commonplace observation that seasonal workers toward the end of the busy season will often turn out fifty per cent. less work per day than earlier when they know there is plenty of work ahead.

Basic in a program for securing interest are provisions which will give a reasonable security of livelihood, provided workmanship of quality is displayed.

More Careful Selection.—It is a natural conclusion from our definitions of interest and monotony that a given worker will be interested by some jobs and bored by others. Much may be accomplished by seeing to it, therefore, by methods which we have already discussed, that selection takes place which intelligently relates the quality of the man to the character of the job. This does not, of course, meet the problem of those jobs of low mental content which with a half day's instruction anyone can do. But it does reveal the importance of giving the person of sedentary disposition sedentary work, the person of delicate

¹ See Chapter XXVII.

tactile sense, precise manual work; the man who likes to meet people, work with people; and so on through all the combinations of human characteristics which we know and for which up to a certain point temperamentally congenial industrial pursuits can be selected.

Nor can this selection safely be considered as ever quite finally accomplished. The workers' attitude toward a particular job may change and when it does, it becomes necessary to get a better adaptation of man to job. There should, in short, be a constant process of selection—which of course merges into transfer.

Knowledge of the Processes of the Industry as a Whole.—To the person capable of dramatizing it in his mind's eye, the structure of industry as a whole presents itself as a fascinating interrelation of parts and functions. The organization within each industry is equally a matter of interest. In almost every industry the discovery and development of the methods of securing and utilizing raw materials is an interesting story which commences in prehistoric origins. The securing of materials in the world markets, its transportation, the whole process of manufacture, methods of studying the demand, the distribution, advertising and selling—all these present a range of effort and activity which is stirring as well as illuminating. *Each worker in every industry has the right to know these things about his own industry.* He has a right to be a *conscious partner* in the world enterprise to which his trade is related. The sense of personal significance which comes with such knowledge is real and necessary.

The ways of imparting this knowledge are numerous and there is room for infinite ingenuity in devising new methods. The instructional staff of the plant should, from the outset, be charged with this work of education. Classes of new workers might be held every few months—as often as enough new workers have entered the plant; and they should run for a number of weeks, twice or three times a week. The use of moving pictures to illustrate the sources of raw materials and processes of their development; the use of special experts to lecture on different aspects of the production process, as well as on the uses and methods of distribution of the product; visits of the class through the entire plant; the use of selected employees in a versatile flying squadron; the use of employees in rotation as factory guides for visitors; the invitation of the families of workers to go through

the plant on a visit; the use of the right type of company magazine; the preparation of specially adapted text books;¹ instruction in the use of production records; consideration with the advertising department of effective ways of popularizing all this material—these are all methods in use in one plant or another, and experience amply justifies their extension.

And the time has come to include instruction in the elements of general economics; although there is the danger that the subject will be taught with a view to justifying existing practices. It should be purely *descriptive* economics; although such fundamental considerations as the following should be illustrated by facts:

Industry cannot distribute more than it produces.

“Economic laws” are not a statement of absolute and immutable principles,—they are attempts to describe existing facts.

Human wants are practically inexhaustible, hence the more there is produced, the more will be consumed (provided there is a high level of wages, popular leisure and some one does not step in to monopolize the production, inflate prices, etc.)

Training for the Job.—It goes without saying that the worker who has been properly inducted into the intricacies and the “why” of his own job will like it better and do it better than the person who proceeds wholly by rote or imitation. There are good and bad ways of doing every operation; and the man who at the start is skillfully taught the right way with the reason, is in that mental attitude from which interest arises. This is especially true if the management is of a character which assumes that “the right way” is at any time subject to change if real improvements are suggested.

The Use of Records of Production.—We have already pointed out how important it is for foremen to be put in possession of the production records of their department. It is no less important for the worker to be in possession of his own individual or group production record.

Convincing evidence of the value of production records to create workers' interest in their jobs has been published by

¹ The literature of the mechanism of individual industries is gradually developing. But much of it needs adaptation for use with manual workers. The B. F. Goodrich Co., of Akron, O., has already prepared as Volume I in a reading course for employees, A Wonder Book of Rubber. The name itself is suggestive of the dramatic possibilities in the story of an industry.

Robert B. Wolf. His results have been so widely discussed that it is unnecessary to do more than call attention to his experiences here. His conclusions, drawn from the paper making industry, are briefly as follows:

"These records we found to be grouped under three general classes: *quantity* records, *quality* records and *economy* or *cost* records. Quality records are, perhaps, of the greatest importance for they bring the individual's intelligence to bear upon the problem and as a consequence by removing the obstacles to uniformity of quality, remove at the same time the obstructions to increased output. The creative power of the human mind is, however, not content simply to produce the best quality under existing conditions of plant operation. So the desire to create new conditions for the more highly specialized working out of . . . the process . . . at once takes the form of suggestions for improvements in mechanical devices.

"Because of the interrelation of Quality, Quantity and Economy records, any complete record of individual progress must, of course, take them all into account."¹

Mr. Wolf's results would be significant by themselves. But there is an increasing body of testimony from other plants to confirm his conclusions. One plant displayed a large black board on the wall at the end of one department. The board was so ruled that every man's production could be recorded every hour; one hour the amount would be projected in white chalk, against each man's name, the next hour in red, etc. A normal day's output was formerly considered to be about 1400 units. At the end of the first day's use of the published production record, several workers produced over 2000 units and all went above 1800. Today between 1800 and 2100 units are considered a normal output.²

An English accountant writing on the value of a knowledge by the workers of a department of the costs involved, cites the following experience:

¹ From *The Creative Workman*, an address published by The Technical Association of the Pulp and Paper Industry, New York, 1918. Mr. Wolf's writings are listed at the end of this chapter.

² It should be emphasized that such an innovation is not without serious danger of abuse. The above illustration is given at its face value, but it would be necessary, before passing final judgment on its success, to know what effect the increasing speed of work had on the workers, on the continuity of their work and on their pay.

"At a certain factory the tool-room cost for each production unit of 1,000 articles manufactured was 10s. (\$2.43); at a corresponding factory the cost was 4s. 6d. (\$1.10) per unit. In eight months after a costing system was introduced in the tool-room the cost per unit was reduced from 10s. (\$2.43) to 2s. 10d. (\$0.69) per unit. Improvements effected by the introduction of this system were: (1) The firm reduced the tool cost by 72 per cent.; (2) the tool-room operatives earned higher wages owing to the reduction in wasters and consequent increased production; (3) the foremen and charge hands received a bonus above their normal wages; (4) the works operatives were insured a regular supply of tools, thus facilitating production and avoiding the idle time which had previously occurred."¹

Again, a number of plants where the raw materials used are expensive (*e.g.* hides, rubber, copper) testify that workers are much more careful of material *as soon as they appreciate its value*. A recent writer tells of a gang of men soldering tin cans, who were using from 11 to 19 ounces of solder per 100 cans, where experiment showed that nearer 5½ ounces was the right amount. The men were consulted and it was arranged that they should share in the value of the solder saved. "Now these men are turning out more cans a day than they ever did before and average from 3 to 7 ounces of solder per 100 cans The same plan has worked out with equal success in operations involving the use of sand paper, silk thread in a sewing room, ink in a printing shop, ribbon on hats, brass wire in electrical work and so on."² We cite this not because we are convinced that the bonus is the determining incentive but because of the new attitude it exemplifies. A knowledge of costs is equally important where expensive instruments and tools are used, the value of which is often not appreciated by workers. It is a good rule to be sure workers know exactly the market value of all instruments, tools, equipment, machines and materials which they use. Records of quantity, of quality, of amounts of waste, of unit costs and perhaps of other factors are of great value; but care must be taken that they are presented in the right way. They should, for example, be in as simple and intelligible form as possible; if this is accomplished best by graphic charts, these should be

¹ JENKINSON, WEBSTER M. The Workers' Interest in Costing. As reviewed in the U. S. Bureau of Labor Statistics. *Monthly Labor Review*, v. 8, pp. 1542-3, May, 1919.

² BASSETT, WM. R. Developing Pride and Interest in the Job. (In *Factory*, v. 22, pp. 693-6, Apr., 1919.)

used. The records should also be comparative with those of previous days, weeks and months; and there should be an opportunity to compare results from one year to another.

Records of this type are different from a type of "efficiency record" which has been attempted in some plants. The efficiency record appears usually in terms of percentage—the per cent. that each worker's output is of a given "bogey" or standard day's work. In one plant this bogey was set so high by the management that workers rarely got over 70 per cent. "efficiency." When the workers discovered the reason for this, they lost interest in comparing their rating with the next man's and with their own from day to day; and the record was eventually discarded.

Under any conditions, if the record is to be used to stir up a spirit of competitive emulation or a constant and hectic rivalry, it will be in danger of digging its own grave. Unless the workers themselves have the scheme in part under their own control and agree with the management as to a maximum output that is safe to health to secure, exact promises that there will be no rate cutting and agree on standards of quality, normal unit costs, amounts of waste, number of seconds, etc., any scheme of competitive speed-up will be of little value.¹ It is because such agreement can be best secured through some form of committee action that we consider this as the next means of fostering interest.

Workers' Committee Action on Production Problems.—We desire to stress a function of shop committees and a type of shop committee not usually dwelt upon today. The test of the vitality of committee action is not to be its success in handling personal maladjustments which have arisen; the test is rather in its ability to arouse and continue a serious interest in the production problem as such, in process, methods, specifications, formulæ, etc.

There are good reasons why this increasing interest in process must take place. For there are a number of factors relating to the production process which require harmonious decision if the work is to proceed smoothly. These are, first, methods of carrying on the work as the process stands; and, second, agreement upon the adoption of changes and improvements in process.

It is, for example, important to know how long it should reasonably take to do an operation; how many of those operations can be safely done in a day or week; what motions and

¹ Further discussed in Chapters XVIII and XIX.

methods are quickest and least fatiguing; what the variable elements are which affect quality; etc. *The securing of this information and the adoption of terms of employment based on it, cannot with safety to management or men be left in the hands of staff experts.* The workers should be consulted since they know the job in a way that no one else can. Moreover, until they are prepared to accept any new terms or new standard practice, the work of the experts is of little use anyway. Their assent is in the last analysis the essential prerequisite to manufacturing. Hence consultation with those at a job is recurrently necessary as orders change, improvements are suggested and processes modified. Only so can an assent be secured which is ungrudging and reasonably acquiescent. This consultation should therefore be so carried on as to include as many workers as possible—to make each worker, as one writer has happily expressed it, an efficiency engineer. Success in this attempt means the creation of interest of the most genuine sort, since attention is being paid intensively to the job in hand.

This interest can be even more deeply stirred if, in addition to agreement upon the terms of work as determined by job analysis, there is a constant mutual effort to improve the technique of work.

The latent inventive power of each shop can be helpfully challenged in a way to arouse a really scientific interest in method, if only the organization exists among the workers through which to work. One of the most suggestive services of Mr. Leitch's "Man to Man," is the account he gives of the active interest the workers take in process as soon as they have problems put to them in their organized capacity and have a stake in the improved results.¹ One of his illustrations has been interestingly summarized in the following paragraph:

"A large manufacturer of velvets was having trouble with 'seconds'; at times half a million dollars was tied up in goods that contained weaving defects unfitting them for first grade sale. He put the question up to the employees themselves—they were organized on the representative system. The men appointed committees to investigate, they made tests themselves and they retained experts from the outside to make other tests. They, from time to time, told of their work in mass meetings and received criticisms and suggestions. Soon that whole factory was after 'seconds'; they improved machinery, insisted on cleanliness

¹ See LEITCH, JOHN, *Man to Man*, pp. 48-62, 67-91.

and finally changed the weavers from a quantity rate to a quality. They have now all but cut out 'seconds' and under the quality rate the weavers are not only making more money than before, but they say they are making it with less effort than when they tried solely for quantity. But the quantity has also increased. I have through my business associates secured very similar results by the use of similar methods in a plant making linoleum."¹

But workers' advices and cooperative job study are likely to lead to demands for drastic changes. And the adoption of important technical changes including further application of labor saving machinery will, sooner or later, mean that fewer workers can do the necessary amount of work. Unquestionably one of the reasons why there has not been greater working class interest in technical improvement, has been the fear of this displacement in favor of machinery.

It is because we conceive of this function of job analysis and of agreement on fair amounts of work in relation to its finds, *as a joint task of management and men at each job* that we are less disposed than some to stress the unique value of a wholly separate suggestion system. In the normal course of joint job analyses, joint determination of a fair day's work and joint agreement to technical improvement, suggestions would naturally and normally arise, be considered, adopted and rewarded under joint direction. Hence the need of a distinct system would not be pressing. But because many plants have not yet come to see that the real function of committees is constructive and preventive rather than mediatory and conciliative, we shall consider suggestion systems as a means of arousing interest.

A final word is necessary here, however, to prevent possible misunderstanding. Shop committee action may conceivably result in two things; in arousing interest in process through discussion, conference, study of records, etc.;² or in arousing interest in discussion because it is easier to talk than to do the job. Critics of the committee idea are fond of urging that the second of these results will be the one obtained. The answer is that if the committee work is undertaken *with an educational*

¹ BASSETT, WM. R., *When The Workmen Help You Manage*, p. 113.

² The Western Efficiency Society finds in answer to a questionnaire that 55 per cent. of plants which have shop committee plans (of any sort, not necessarily meeting to discuss production) report that these have "stimulated production."

motive and under educational direction, there need be no fear of the results. And existing efforts to interest workers through group action tend effectually to prove that the positive results are exceedingly beneficial.

Transfer and Promotion.—As a purely business proposition, managers should do far more than is now thought wise, to encourage transfer, as one method of relieving the worker at automatic operations. The use of the morning for one job and the afternoon for another has already been mentioned. Other aspects of transfer have been discussed previously and we mention it here only to indicate that jobs which may be self-expressive and interesting to master at the outset, may after six months or a year become completely uninteresting; just as jobs which will be tolerable for five or six hours may be maddeningly dull for ten or twelve.

We are in this proposal simply capitalizing the dictum about variety and the spice of life; and there is growing agreement among employment administrators that such variety can be found in transfer—found to the advantage of the employer in greater volume in output and of the employe in greater interest in work itself. The possibilities of periodic transfer in this direction are all but untouched and since it offers a genuinely and mutually valuable psychological stimulus if administered properly, it is to be hoped that the extension of its use will be rapid in the immediate future.

The same is to be urged regarding promotion,—although we have to stick closely to the facts and remember that the number of places in the executive staff, or at the operations requiring most skill and training, are always limited; and that the proportion of managed to managers is from this point of view discouragingly large. Promotion to executive positions can thus only be of occasional help in meeting this problem; but there is every reason to use it to the limit. However, in the advancement from one position to another, a hierarchy of achievement in the shop can often be worked out. And while a job may soon cease to offer large possibilities of itself, it will not become completely uninteresting if it is known to be the stepping stone to another after a stipulated time. It is the common experience in all types of work that if the worker has his eye on some goal which he is intent upon reaching, his job becomes for a time less irksome and more significant.

Maximum Introduction of Machinery.—It may seem odd that we should suggest that additional machinery can make work more interesting. There are, however, industries and factories in which the amount of hard, disagreeable, physical drudgery is still considerable. There are plants where men by operating machines can do more and better work than by hand, do it more easily, and must in order to secure quality take a real interest in the work as it goes through the process and in the machine which does the work. Other things being equal, it is to everybody's interest to have the best known machinery installed at every operation. And if, as is possible, this means an increase in the number of simple machine-feeding jobs, we must seek elsewhere for self-expression, knowing that with less labor far more goods are being supplied.

Shorter Hours.—One way we can meet a condition where workers find work monotonous is to shorten hours, especially at the highly repetitive operations. The forty-four and forty hour week already exist in certain trades, but it remains for society to use real discrimination and apply the shortest hours first to that labor which is either most arduous or most monotonous. What can serve the same purpose is to have two different jobs, or operations,—one in the morning, the other in the afternoon.

In rural industrial centers many workers of their own accord elect to do factory work in winter and agricultural work in summer—a division of labor for which there is much to be said. Indeed, we may in some not too distant future, de-urbanize our factories to an extent that more and more workers can combine indoor and outdoor work. This is the serious proposal of not a few social scientists.

Nor should we forget in this connection the English proposal¹ that the factory operate twelve hours in two shifts of six hours each.

This advocacy of shorter hours as a way to relieve monotony is by no means in conflict with our thesis that much work can be made interesting. But we may as well be honest with the facts and admit that *as we know them now* many factory processes carried on for a nine or even an eight hour day are *not* educational or interesting. With shorter hours, however, the inherent and derived interests here enumerated would combine to give the

¹ See Chapter VII.

worker the maximum satisfaction in work; and even at seemingly quite automatic jobs the curve of interest would not have time to fall to zero.

Suggestion Systems.—The experience of the last few years in which the use of suggestion systems has extended rapidly, points to a number of general practices which can be briefly stated to show in what ways they best foster interest in work.

It is first necessary to remove from the foreman's mind any idea that suggestions from his department reflect upon his ability. Foremen can be brought not to oppose but actually to encourage the working of the system. This attitude is more readily assured in some plants by periodically rewarding the foreman from whose department the largest number of suggestions have been received or adopted.

Fairness in the administration of the system is essential. Workers will feel most confident that there is fair play *if they have equal voice with the company in determining the terms on which the system runs, in determining which ideas shall be accepted and how much reward shall be given in each case.* Such joint action of itself keeps interest alive, especially if, as is desirable, some members of the suggestion committee rotate every six months. This has the further indirect value of educating the committee members in problems of process and technique.

Employees should be acquainted with the terms of the system, the method of determining acceptance, and of evaluating the suggestions, etc., by bulletins, notices in company papers or pay envelopes, and by other means that reach all employees with a reminder at occasional intervals.

Prizes should be given at monthly intervals and with effective publicity. Also public acknowledgment should be made at the end of the year to the department submitting the highest number of adopted suggestions, the individual submitting the largest number, the individual submitting the most valuable suggestions, etc.

The problem of the amount of the compensation for accepted suggestions is not always easy to handle. To have a scheme of only arbitrary flat sums may at times be quite unfair to the employee. We say this with full appreciation of the fact that the worker in any valuable invention is usually building on the company's own experience; but this will, of course, be taken account of in determining the reward. On the other hand, if

employees are to keep up their interest in improvement, they must know absolutely that this interest is not to be an occasion for exploitation. Yet it is difficult before trying out a new idea to know its value. Perhaps a combination of two methods could be worked. Each suggestion could be rewarded in accordance with an agreed scale of awards, and when it is seen that the best ones are saving the company substantial amounts (say, after six months), a more equitable division could be made. It seems to us, however, that if the workers have equal voice with the management in the matters above suggested, there will be less danger of employees feeling unfairly treated.

Where the new idea is patentable it is worth while for the management further to protect the workers' rights. In some plants employees, as a condition of employment, have to sign waivers of any rights in inventions forthcoming during their stay. For reasons growing out of the use of some unique trade secret, a few companies may feel themselves justified in requiring such a waiver. But it would seem ordinarily to discourage inventiveness from the start. A royalty contract, designed to cover with fairness to all parties the situation where an employee has a patentable device, has been drawn and some such method as this is to be preferred to the waiver.¹

Again, it is important to have suggestions collected regularly from the designated boxes in each department, passed upon promptly (at least once a month) and employees notified as soon as action is taken. Pains should be taken in each case to explain why rejected suggestions are not utilized. And it should not be required that accepted suggestions be put into immediate practice in order to be rewarded.

Employees should have the right of appeal to the committee if unsatisfied either with the action on the suggestion or with the reward.

Only actual manual workers should be eligible for awards under the system. Executives from the assistant foreman up are supposed to be looking for better methods as a part of their jobs.

In plants where little is done in other ways to arouse interest, the suggestion system can undoubtedly afford the basis for a

¹ PILKINGTON, R. G. Fair Royalty Contract for Employees. (In *Am. Machinist*, v. 47, pp. 1027-8, Dec. 13, 1917; v. 48, pp. 363-4, Feb. 28, 1918.)

healthy start. But unless there is considerable follow-up from the office of the employment administrator there is danger that after a little the interest will lag. For, after all, the method of dropping your suggestion in a slot is singularly impersonal and artificial; some method more direct, natural, humanly responsive and more organically connected with the technical job study is ultimately desirable.

Factory Fellowship.—An indirect interest in work is unquestionably afforded by the pleasant fact of fellowship with other workers. This is not the same thing as being interested in the work itself; it is what we may speak of as a derived interest. It has, however, a positive value which can legitimately be utilized. People of both sexes and all ages like to be in agreeable association with those whom they know and like. A social life inevitably grows up in a factory which has its own gossip, traditions, jokes and by-words. The work may be completely without interest, but still workers like to be there in order to be in the swim of the familiar social life. And since the condition of being there is to do the work—the work gets done.

When factories accentuate this normal *camaraderie* by encouraging athletics, dances, dramatics and other recreational functions, a desire to remain employed may be unduly stimulated. Emphatically, this is not interest in work although it may be used to lead to it; and where the work itself seems irrecoverably uninteresting, it may be one of the next best substitutes if it is not over-developed. Fellowship for its own sake is no doubt a good thing to foster; and it may be a necessary thing to foster to make the work tolerable. But with this the more direct methods of creating interest in work should be utilized.

There is another aspect to the fellowship feeling, however. The committee action, above mentioned, is an experience of fellowship; the whole enterprise of working in a factory is an experience of fellowship—of cooperative action and associated effort. And psychologically it is true that all activity in satisfaction of this strong social sense (herd instinct) is pleasurable activity up to a certain point. So that *there is also a real and normal interest growing out of the fact of working with others.*¹

Rhythm.—One of the almost wholly unexplored fields of industrial psychology relates to the use of rhythm and music to make work more interesting.

¹ See MAROT, HELEN. *The Creative Impulse in Industry*, pp. 108-46.

The conscious mental content of the job is of course unaltered by the use of rhythmical activity. But fundamentally its self-expressive content is altered because to the normal individual the utilization of rhythmic motions is of *itself pleasurable*. Apparently a love of rhythm is one of the most deep-seated of human tendencies. Its use for any activity releases unexpected energies and sustains them for unexpectedly long periods. It tends not only to reduce the feeling of fatigue but the actual physiological processes of fatigue as well. Evidence is not lacking that work done rhythmically is done with less conscious effort than when rhythm is absent. And the utilization of rhythmic motion or actual music itself, seems to have recuperative value from a physiological point of view. It may not be accurate to say that music increases interest in the job; but it certainly makes being at the job more interesting, especially if the motions of the job can be rhythmically performed. It is to this extent another derived interest.

In consequence, at those jobs where the noise of machinery is not too great, the occasional use of music—either as rendered by phonographs or by the workers themselves in shop singing—can be a positive benefit to the workers and to the output. This is recognized by many plants to the extent of having dancing at rest periods and lunch hours, and band concerts in lunch rooms and assembly rooms. But this is not the same thing as encouraging mass singing at work or providing music to the rhythm of which operations can be carried on. There is a fruitful field for experimentation here. The injunction of the philosopher, Give me the man who sings at his work, may still be recovered for fruitful application today.

Wages.—It goes without saying that unless wages are at least enough to provide a decent standard of living without anxiety, there cannot be interest in the work. But the claim that the sole motive in working is the pay envelope, must seem to be an unwarranted over-simplification after what has been said. The motive to possession and to increased rewards is an important one. But we must get away from this idea that the workers care only about the pay envelope. The impulses to create and construct and to satisfy one's curiosity, one's desire for the approval of others, one's sense of significance, are all legitimate parts of the human equipment and demand satisfaction. Industry has worked too long in the belief that all the workers want is wages.

The thing to do now is to supply an incentive in the work itself, as well as in the rewards accruing out of the work. Admittedly the non-financial incentives so-called, might be used to exploit the workers. But any discussion of the methods of interesting workers presupposes that the management has a disposition to treat the payment problem fairly.

The Ownership and Control of Industry.—It is important to remember that when all is said and done the determination of when a factory is to run and how its earnings are to be distributed is in the hands of the people who own the factory. And our whole system and the interest that the workers can take in it, is naturally modified in a fundamental way by this fact that the ownership is vested in absentee or manager stock-holders and that ultimately decision about returns from the industry is vested there also.

In a recent article on the "Laborer's Turn" is this arresting sentence:

"It is vain to expect labor to respond to the requirements of an intensified production so long as industry is organized on a basis of master and man, with the master class draining away those elements in the working population who are most needed to leaven the mass, to endow it with a spirit of self-conscious creativeness."¹

Another carefully phrased sentence of similar content says:

"Even the most enlightened labor policy cannot eliminate the conflict of labor and capital generally, because it cannot eradicate the difference of interest which exists in the very nature of things between capital and labor due to the fact that capital is a buyer and labor a seller."²

And one of the most acute students of the American industrial system, makes the following observation:

"A business control of the rate and volume of output is indispensable for keeping up a profitable market, and a profitable market is the first and unremitting condition of prosperity in any community whose industry is owned and managed by business men. And the ways and means of this necessary control of the output of industry are always and necessarily something in the nature of sabotage—something in the way of retardation, restriction, withdrawal, unemployment of plant and workmen—whereby production is kept short of productive capacity.

¹ JOHNSON, ALVIN. Laborer's Turn. (In *New Republic*, v. 10, pp. 183-5, June 7, 1919.)

² SLICHTER, SUMNER H. The Turnover of Factory Labor, p. 422.

The mechanical industry of the new order is inordinately productive. So the rate and volume of output have to be regulated with a view to what the traffic will bear—that is to say, what will yield the largest net return in terms of price to the business men in charge of the country's industrial system."¹

Whatever truth there may be in such statements as these deserves to be carefully considered; for there will certainly not be interest in the work in the deepest sense, if the self-expressive activity of the worker is found upon analysis to be more expressive of the will of some employer or banker, or of the urgency of the demand to earn a livelihood, than expressive of the inner creative impulse of the man himself. We may at once appear open to the charge of utopianism if we draw the conclusion that the psychological conditions of interest are most completely met where the manual workers join in some way with the head workers in undertaking the direction and control of the plant. But as students we cannot hesitate to follow where the argument leads.

The real crux of the problem is less factory control, however, than the control of ownership and distribution. Ownership today means control of the credits needed to build and extend equipment, purchase material and build up sales. Credits, we know, are granted under conditions where a return on the investment is fairly well assured. Practically speaking, the workers do not today want or ask for the title to ownership. But they might, and in some cases do upon consideration, feel that they are asked to interest themselves in an enterprise from which, while they may get a living (not regularly assured at that), those who have extended the credit get proportionately a larger and a more permanent return. This thought that while they get wages for work, others get income for ownership of the premises and equipment, will in the course of time give rise to a feeling of injustice. Such a feeling is fatal to a sense of real interest. People with genuine self-respect are loath to become absorbed in a job out of which they are exploited—even if there are elements in the job itself which arouse interest. A sense of equal and genuine partnership is only another name for one aspect of truly self-expressive activity—activity which expresses the impulse to be and work with others for the common advantage.

Interesting light upon this point of view is offered in a letter

¹ VEBLEN, THORSTEIN. On the Nature and Uses of Sabotage, *The Dial*, v. 66, pp. 341-6, April 5, 1919.

sent from Hungary early in 1919 by a careful and conscientious observer:

"I visited a great factory at Budapest which makes electric lamps, telephones and telegraphic apparatus. The soviet (*i.e.*, directive committee) consisted of three scientific and four manual workers. The manager was a former engineer of the works, a man, obviously, of ability and good sense. Three former directors were employed as consultative experts. All the infinitely skilful work of this vast organism went on as before, with this difference, however, on which workmen and managers both insisted, *that men and women alike worked with more spirit, more conscience, more honesty because they felt that they were working for themselves*, and no longer for an exploiter. The Taylor System will shortly be introduced."¹

The reference in this quotation to the Taylor system is identical in effect with the discussion by a Russian socialist leader of the change in point of view which should come with the assumption of industrial control by what he calls "soviets." "We should," he says, "immediately introduce piece work and try it out in practice. We should try out every scientific and progressive suggestion of the Taylor system."

Work as Public Service.—Under modern conditions of world-wide interdependence workers have a right to appreciate two truths; first, that they are servants of mankind—self-respecting contributors to the world's stock of necessary goods, receiving their quota (although perhaps not their rightful one) of necessities and luxuries in return for their own contribution; and second, that the world of consumers must put its faith in the integrity of their workmanship—a faith which would cost the community many lives if the workers were to betray it.

The worker in food products must not contaminate them nor make ptomaine poisoning possible. The workers employed in any branch of the transportation industries—from the running of locomotives to the making of automobile springs—may literally endanger thousands of lives by careless workmanship.² In every

¹ BRAILSFORD, H. N. In *Communitic Hungary*. (In *New Republic*, v. 19, pp. 119-23, May 24, 1919.) Italics ours.

² Think, for example, of the educational value of showing men making steel rails, the flaws in a rail which has caused a serious wreck. One firm manufacturing batteries for submarines during the war chose only girls for assembling work who had relatives in the war; and these girls were instructed carefully as to the use to which those batteries were to be put. Another firm which manufactures automobile tires, replaces all defective casings and turns the defective goods over to the foreman of the tire building department to study.

direction we are called upon to put absolute trust in the accuracy and quality of work done; every worker in so far as this spirit of social service is present, is thus really upon his honor to do good work. Many workers have never seen the importance of their work in this light; it has never been dramatized to them; their honor has never been appealed to; and one of the highest and most cogent motives to good work is consequently absent.

The objection will, of course, be raised that it is out of the question to instill into manual workers this conception of industry as social service and of keeping faith with the consumer, if the employer himself is remiss in these directions. We see no answer to this objection in those cases where motives are narrowly selfish and methods of manufacture or sale unscrupulous. Those employers who have unwisely sowed the wind, reap the whirlwind; and society is the sufferer.

But it is happily true that a newer conception of the purpose and the ethical obligations of industry is gaining headway among employers; and as fast as it comes and eventuates into practical conduct which society including the workers believes to be more just, the workers can be appealed to and they will respond. In the last analysis there is no appeal which stirs such deep and lasting interest as the *appeal to honorable and honest service in behalf of one's fellows*. In that day when industry is run not incidentally to meet people's known needs, but avowedly organized to that end, we shall have a motive to good work which is now all but untapped.

The recent declarations of the British Labor Party confirms this conclusion from an interesting angle:

"What the Labor Party looks to is genuinely scientific reorganization of the nation's industry, no longer deflected by individual profiteering, on the basis of the common ownership of the means of production, the equitable sharing of the proceeds among all who participate in any capacity and only among these, and the adoption in particular trades and occupations of those systems and methods of administration and control that may be found, in practice, best to promote the public interest."¹

Mr. Cyrus McCormick, Jr., of the International Harvester Company, is responsible for the statement that:

¹ Labor and The New Social Order, a platform submitted for the consideration of the British Labor Party. Published in *The New Republic*, v. 14, sup. pp. 1-12, Feb. 16, 1918.

"What the workingman is asking for . . . is a voice in the control of business in which he is a co-partner. This demand has taken on various forms in various countries. In Russia and elsewhere on the European continent it is known as Bolshevism; in England they call it the Whitley Plan; elsewhere it may be called employees' representation . . . Under all of these, it is the basic fact that the relationships . . . must be founded on something else than a cash bond . . ."

And Mr. Henry L. Gantt writing out of a successful consulting experience of over twenty years has come finally to the conclusion—expressed in italics—that:

"We have proved in many places that the doctrine of service which has been preached in the churches as religion is not only good economics and eminently practical, but because of the increased production of goods obtained by it, promises to lead us safely through the maze of confusion into which we seem to be headed, and to give us that industrial democracy which alone can afford a basis for industrial peace."¹

Statements like these, while they prove nothing, are at least indicative of a point of view toward interest in work which is unquestionably gaining adherents. It is a point of view which holds that workers are less truly interested in activities undertaken for private profits wherever they can be secured, than by public service wherever it is demonstrated that human needs are present. This is, of course, a fundamental criticism and to the extent that experience substantiates it, correction will have to be undertaken by society as a whole in the public interest, and not solely by any one class in its own interest.

Such correction, if undertaken, is likely to be long in coming; and it should not be surprising if in the interval of transition, the fostering of interest in work is not completely successful. There is, however, no adequate reason why every legitimate expedient should not be progressively resorted to, for high productivity is at bottom conditional upon interest in work. And upon high productivity the community as a whole must immediately depend in order to secure a comfortable and reasonably cheap living. The community can, therefore, afford to encourage industrial managers to go to great lengths to stimulate interest. And if some modification of the present dominant motive of private profits seems clearly to be required, consumers as a whole should be the first to clamor for it. If pressure can come from

¹ GANTT, HENRY L. *Organizing for Work*, p. 104.

consumers and workers simultaneously there will be some hope that industrial changes will be achieved by temperate, democratic and permanent measures.

We can most pointedly conclude this discussion of interest by recalling the inseparable relation between interest and efficiency. In the last analysis factory efficiency derives from a combination of perfected mechanical contrivances and arrangements, scientific coordination and control of flow of work and an attitude of interest and initiative on the part of all the workers. This attitude of interest and initiative is not in the long run bought, bribed or teased out of workers. It flows out naturally and necessarily if the conditions are right. All that anyone can do is to help to create those conditions, bearing in mind the psychological springs of interest.

In short, efficiency is not present unless there exists the consent of the workers. The consent of the workers is not actually present unless it is an active and voluntary consent. And that attitude of willingness and of desire for self-initiated activity is the result of genuine interest in the enterprise growing out of a sense of partnership in its conduct. Hence our conclusion that attention to the securing of interest is an immediate duty in any factory where the aim is efficiency through economical operation and cordial working relations.

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CHAPTER XVI

TRANSFER AND PROMOTION

In the normal individual, interest in work comes from a sense of the work's inherent appeal, of its significance and value in his life and progress, of the approval that its doing wins in the eyes of others. To secure that interest under present factory conditions is not easy without the special planning of such methods as were discussed in the previous chapter. The place that transfer and promotion may hold in such a plan is large because both are means of appealing to fundamental characteristics in human nature. Both are means of breaking a dull routine; of holding out promise of change and new opportunity; of appealing to the individual's pride of work, mastery or desire for advancement.

Transfer we may define as a shifting of workers among jobs requiring approximately equal abilities, for the purpose of securing a better adjustment of worker to work, of providing a varied outlet for his energies or of regularizing his employment so as to supply steady work.

Promotion is an advancing of workers to new positions requiring greater ability, or involving greater responsibilities or commanding higher pay.

Unfortunately many companies are still unconvinced that there are business values in systematically encouraging transfer and promotion. They may even feel that transfer is not feasible or desirable and that workers prefer to stay at one job; and that promotion need not be considered except at those occasional times when an executive has to be replaced by death. It is, in short, essential that a company have a sympathetic attitude toward the desirability of a defined policy on these two matters. And we shall, therefore, consider first the reasons for acting affirmatively in setting up a procedure in these two fields.

Reasons for Transfer.—There are good business reasons for agreeing upon a definite transfer policy. The desirability of getting a spur to interest by holding out the hope of leaving one job to go to another is of primary value.

But many corporations are not as yet sufficiently flexible to permit any very systematic rotation in work positions. They have not as yet generally thought of transfer as a method of alleviating narrow specialization, monotony or restlessness. They have not availed themselves of its educational value in stimulating interest in work, increasing skill and broadening knowledge. As a result men are tied down to tasks which do not call forth their best qualities or hold any vital interest for the mentally alert, and thus a plant's labor turnover tends to increase in spite of the careful examination and selection of workers at the time of entrance.

Also, wherever initial selections have been unwisely made, there is the need for an agreed machinery for getting the workers adjusted into the organization, by shifting them to jobs they can do well or really like.

There may, again, be "dead end" jobs that lead nowhere at which it is unfair to hold the worker either because the work or the pay offers no future.

There are other jobs from which transfer should be readily provided on health grounds. If it is found that work brings on special strains or predisposes to certain diseases, the worker should be required to transfer.

In some few companies the employment and medical departments jointly set a time limit on jobs where there is likelihood of occupational disease—as for example, in sand blasting, curing hides, rubber manufacture, or in contacts with and exposure to poisonous materials. At the close of this time limit the employee is re-examined physically to ascertain if transfer is necessary. In an extremely noisy department of a large rubber concern workers are examined at frequent intervals and those showing slight defects in hearing are transferred.

Another important reason for transfer may be lack of work in the department where the worker is originally placed—due either to a slump in orders or to seasonal fluctuations. In such cases the desirability of providing ways to keep on as large a body of trained workers as possible will be seen at once by the personnel manager who under the old method had to build up the force afresh each season.

There are occasionally also reasons of personal maladjustment between foremen and workers or among a group of workers, which make transfer beneficial to shop harmony. Where people

do not thus "hit it off" together, there is every advantage in re-arranging the personnel until a companionable grouping is secured. Sometimes these personal animosities are really racial in origin and in such cases racial prejudices have to a large extent to be respected. And in the interests of shop tranquillity, workers whose nationality makes them offensive to the great majority of their fellows may have to be transferred.

Reasons for Promotion.—The spur to individual initiative which comes with the chance for advancement in earnings and in honors is proverbial. It is a spur which, if the advancement is really forthcoming, is of great and legitimate value. For many organizations lose a considerable degree of the enthusiasm and zeal they might command by failing to make it apparent that they will recognize merit and advance the ambitious.

Moreover, promotion from within means a conservation of interest, loyalty and knowledge of company methods, which is a real asset. Corporations should capitalize the experience of their own people by using them for the higher positions wherever possible. There is, we agree, the danger that a too intensive program of promotion from within will lead to the "inbreeding" and "dry rot" of an organization. But that danger if recognized in advance can be forestalled by the right kind of broadening educational procedure.

Prerequisites of Effective Transfer and Promotion.—All systematic plans of transfer and promotion presuppose that the personnel office is responsible for taking the initiative in carrying them out. In the production departments the actual order for transfer and promotion might be issued by the production manager's office, but it would come largely at the instance of and in constant cooperation with the employment office.

This indicates, of course, the necessity of careful follow-up of workers by the employment director, in order to be sure that they are properly selected for their work, in order to discuss with foremen candidates for promotion, and in order to arrange transfers in accordance with a prearranged schedule. It should be his work in conference with instructors and foremen to recommend all shiftings and advances in those departments over whose personnel procedure he has charge.

All work of adjusting employees into the most suitable positions, all planning of transfer and all promotional charts, must be based on intimate knowledge of the content of jobs if the

results are to be scientifically sound. Job analysis, or in its absence the less intensive job specifications, are needed for each position. For it is essential to know the precise nature of the abilities and the relative amounts of ability which the several jobs require. Job specifications throw, also, much light on the similarity of jobs, or on the fact that similar training may be utilized at widely different jobs.

Methods of Transfer.—Some firms, in order to place the worker from time to time in best relation to the known requirements of the jobs, seek to secure on the new workers' application blank all possible information about their previous work, their special talents and interests.

From the point of view of offsetting the deadening results of machine "minding," a policy of transfer requires a schedule of maximum time limits beyond which workers are not kept on jobs. For example, a factory, after study of the operations in its departments, might plan to rotate all the workers at certain jobs with not more than a six months' stay at any one of them.

Such an arrangement should of course be administered with a good deal of flexibility; and it requires some readjustment in the mental habits of executives and workers. But once under way its stimulating effect on all is tremendous. For one thing, such systematized transfer would probably require more extensive as well as perhaps more intensive training. The policy of requiring new workers to learn several operations at the start is in line with this suggestion; indeed, this has been found exceedingly helpful in plants where seasonal fluctuations make it necessary for employees to work in several departments if they are to secure consecutive employment.

A few plants have developed the "flying squadron" idea among their manual workers. The plan here is to select a group of from a dozen to two dozen workers who have worked through the several processes in a plant and demonstrated their versatility, and make them a team which can be turned temporarily into any department where production has slumped. Those who train for and those who are selected for the squadron have to be carefully transferred, and a position on the squadron is frequently regarded as a promotion in honor or earnings or both.

Workers' Attitude Toward Transfer.—Managers have occasionally found at the outset that workers are not enthusiastic about a systematic policy of transfer as an offset to the routine

character of their work. The reasons for this inertia should be apparent and they should not be allowed to act too seriously as a deterrent. Indifference to transfer may be due to lack of varied training, knowledge that earnings may be temporarily reduced immediately after transfer, general fatigue due to long continuance at one job in the course of which the worker has lost his resilience, or finally to a mental constitution which loves routine and hates to change even when that change might in the long run benefit the individual. All but perhaps the last of these causes can be met by definite action in one direction or another.

Particular attention must be paid, however, to keeping wages from suffering even temporary reduction. And while some managers may wonder why they should not leave alone workers who have become incapable of demanding some variety of work, the answer is that the long time results of such routineering are deadening to initiative, energy, goodwill and interest. Especially with young workers are the values of their new enthusiasm lost if they are allowed gradually to slip into the idea that work holds no future and no interest. Despite appearances, therefore, the manager who understands human nature will appeal to its creative side by encouraging transfer even when he meets with actual opposition in its introduction.

Methods of Effecting Promotion.—The first practical step in caring properly for promotion is to prepare charts carefully outlining the possible successive steps in advancement which the workers in each department may take. The charts should indicate definite lines of promotion within and between departments, so that every employee can see what opportunities for responsibility and increased reward are before him if he makes good; and can find out what special training he requires before he can advance.

These opportunity charts should be based on detailed job specifications, since in order to grade jobs scientifically it is necessary for the employment department to know the content of the different jobs and the necessary qualifications of the individual workman. A graded classification of occupations for advancement shows the worker the particular relation of the job he occupies to the one next in line for which he may qualify.

Some concerns believe it good policy to encourage employees to study and analyze the duties, responsibilities and opportunities of jobs closely related to their own. The opportunity to advance

from one position to the next logical step leading ahead is made to act as a real and wholesome motivation to good work.

The charts must, of course, give a true picture of the situation; and where promotion depends rather upon special training and superior ability than on mere length and faithfulness of service that should be frankly stated. For the possibilities of advancement may be easily overstated and false hopes be unfairly raised. And it is just as bad to excite unrealizable ambitions as it is to offer no incentives at all.

Promotion as a general policy should, therefore, go hand in hand with definite instruction for higher positions. Much of the elaborate training of large corporations is really directed to the discovery of talent for promotion and the cultivating of special abilities where they are found. Eagerness for advancement and youthful ambition are, managers should remember, no substitutes for real knowledge of the subject matter of the industry. A useful promotional policy presupposes a systematic training policy.

But even with a training procedure elaborated there will be much lost motion if some care is not taken in selecting those who are to profit by courses and special training for promotion. Selection for executive work and for most positions of increased responsibility can, in the light of modern methods, be greatly improved by the careful use of special tests. And the application of intelligence tests and rating scales to meet this need should be carefully considered.¹

More important, however, than such tests in most cases will be actual performance records. Full records of individual work and progress should, therefore, be at the basis of selections for advancement. These records must be simple; the elements which go to give the total showing should be known to workers; and their individual standing should be gone over with them from time to time to give them a basis for their own special efforts and training.

One method of cultivating the training idea in relation to promotion without resort to formal classes is the so-called "three-position plan" outlined by the Gilbreths. Under this plan each worker is conceived as belonging to three groups. He is an instructor in the group of workers just below him among whom he has previously been a worker; he is a worker in his own group; and he is a student of the work just above that which

¹ See Chapter VI.

he now does. As an actual plan of action in any plant this idea may present many difficulties and be quite impractical. But as embodying a helpful attitude toward promotion, the plan is certainly suggestive, since it encourages a dynamic view of workers and of jobs, tends to give the worker a chance to pass on to those who supersede him at a job the best in his own working methods, and tends to spur him to new interest in the work of his superior.

A more formal training procedure in preparation for promotion is the flying squadron idea applied to executive positions. Under this arrangement as used in a number of large plants young men are scheduled to work a given number of months in each department, after which training they are advanced to an executive position from which their rise depends wholly on their own demonstrated ability.

The method of requiring each executive to train and have available an adequate understudy for his own position is valuable as offering promotional opportunity and as sound organization policy. Foremen and factory superintendents especially should be required to select and keep in readiness men who can do the bulk of their work whenever they must be away and who can succeed them if they leave. The policy of understudying executives supplements a promotional policy in many helpful ways.

One prominent company encourages its employees to fill in a "better advantage notice," realizing that some among its men may be working out of their regular line or trade. Every employee is asked to list his qualifications for other jobs than the one he is doing; the extent of his previous experience in other work, and his estimate of what he would like to do or can do better. This notice is given to the foreman, who may transfer or advance the employee to more suitable work or communicate the worker's desire to the employment department. Among the drill press operators, for instance, the company found a Swiss watchmaker for whom the manager thereafter got employment at his own trade. Again, the heat-treating department needed an expert fire-brick layer, and found such a man running a drill press. He was a master at his trade of fire-brick construction, and the company made him general inspector of furnace conditions and repairs.

Other companies issue booklets describing the opportunities at the several positions and encouraging workers to undertake

special study for them. Other companies when an opening higher up occurs post notices through the plant asking for applications.

Promotion to Outside Positions.—When everything possible has been done, however, to open up promotional chances, many firms will have more aspirants for advancement than they have positions. In such situations the value of a policy of promoting “up and out” should be considered. A number of firms have, for example, found that they get the benefit of workers’ interest, energy and zeal sufficiently in a few years under such a policy to make it pay them to help their workers after that time to get higher paid positions elsewhere. And especially where cooperative relations can be established among the employment departments of a number of firms there is no doubt but that promotion “up and out” can be both practical, profitable to all concerned, and a spur to new interest in work.

Properly conceived, however, this promotion or any other need not necessarily be in terms of larger earnings. A new position with more varied work or more interesting work, with greater responsibility and greater prestige, may properly offer a wholesome incentive—especially among salaried workers where earnings are well above a subsistence level. In the shop, on the other hand, promotion may often have to be more largely in terms of higher wages than of a change in work. The important thing is that there be agreement throughout a plant as to what changes in work or pay shall be esteemed as promotion; and that then there shall be some organization of the approval of fellow workers for those who do secure the advance.

The Limits to Promotion.—There is in most organizations room for much more promotion from within than now occurs. But there are also distinct limits to the promotional opportunities—whether they are conceived in terms of work or of pay, or in terms of “inside” or “outside.” For the organization of work in a modern plant strictly limits the ratio of directive to manual workers. It is probably true that most plants would profit by a somewhat higher ratio of supervisory to actual labor than is now typical. One foreman to forty or fifty workers may wisely give way to a basis of one foreman to every twenty or twenty-five—provided we think of the foreman not as a taskmaster but as a skilled and highly scientific supervisory expert. But even so there is not room “at the top” for all “at the bot-

tom" who may aspire to rise. Of course, all do not so aspire; but the fact remains that it will take a lot of hard managerial thinking and reorganizing to make workers feel that there really is a reasonable chance of their rising to the positions they see above them for which they are either actually or potentially fit.

Where seniority is the basis of promotion there may be an artificial limit upon the advancement of young men, which is detrimental. The object sought in most seniority plans is, however, a laudable one. They usually aim to assure continuity of employment for the older workers, to reward their faithfulness and presumably superior ability due to long service, and to encourage workers to remain with the company. These ends can usually, however, be better secured in some other way than by the seniority plan. What is really needed in most corporations that use this basis is rather an adequate pension plan, definition of standards of "a fair day's work," joint determination of the conditions of discharge and joint recommendation of the candidates for promotion. Other things being equal, seniority may constitute a fair basis for advance; but since the complicating factors are so many, it is usually an unduly arbitrary and inflexible arrangement.

Conclusion.—Both transfer and promotion if they are to be pursued as consistent policies will require courage, insight, experimentation and patience on the management's part. There are significant indications in the recent experiences of a number of plants that efforts in this direction will be amply repaid. But at the present stage experiments must be largely rooted in faith—faith that the positive qualities of human nature will respond when given a chance.

Any transfer or promotion plan which is to be permanently sound should, therefore, meet this test: Does the plan stimulate and draw out the desire of people to be creative, to be interested in their own activity, to excel, to win approval, to develop in power of self-expression? Every provision which can be introduced into an organization to release human energies and talents in these ways will help to bring a new spirit and a new result in terms of output.

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CHAPTER XVII

SHOP RULES, GRIEVANCES AND DISCHARGE

We shall consider in this chapter the several topics which relate closely to the maintenance of order and good conduct in the shop—shop rules, absenteeism and tardiness, individual delinquencies of all sorts, grievances and discharge. All of these matters effect the permanency and the effectiveness of the personnel; and they are matters which must be handled with a special degree of deftness, fairness and wisdom if results are to be at all satisfactory. But it is impossible to include here all our suggestions regarding the preservation of shop order, related so closely is this question to job analysis, payment, interest in work, the functioning of shop committees and employees' associations, and to collective bargaining.

If, therefore, the present discussion is read in close connection with the chapters on the above mentioned subjects, it will then be easier to see, what we can only assert at this point, that we are here discussing topics over which acute controversy and a divergence of interest may occasionally appear. And to the extent that this is true, the questions at issue will have to be handled in a way calculated to give expression and weight to every point of view and to assure considerate treatment of every individual involved.

It will also contribute to the wise handling of these so-called disciplinary problems, if the training motive is kept uppermost. This means that the management should strive for a spirit of kindly patience and reasonableness, realizing that in all questions of human contact and adjustment the chances for misunderstanding and error are fully as great on the management's side as on the side of the workers; that both sides can learn useful lessons from the temperate adjustment of shop complaints and grievances. Correction of misunderstandings requires in every instance that both parties be prepared to examine coolly the facts and the issues; and be ready to admit it when they are at least partially wrong, and be ready to correct their own mistakes.

The time is past when disciplinary difficulties can be solved by highhanded and arbitrary managerial decrees. It is a sound dictum of industrial no less than of political philosophy, that "only an unmitigated despotism demands that the individual citizen shall obey unconditionally every mandate of persons in authority." The time has come when from a strictly business point of view the control of internal shop affairs must be considered by management and workers *together*.

Thus it will be an important part of the training work of the plant to make plain throughout the organization the common interest of all in an orderly and law-abiding shop. There may indeed be issues on which workers and management will find themselves at odds. Certain divergences over pay and hours may be of such a character. The management may also want rules which confine the worker narrowly to his bench; the workers may seek more latitude in shop conduct than the management believes expedient. But once agreement on shop regulations is reached, it is in the common interest that they be adhered to by all. A reasonable degree of "law and order," promptness, and subordination of individual whims, is a necessary condition of shop efficiency. Work of any sort presupposes for its effective doing a freedom from undue interruption and distraction, a regularity of attendance and effort, which in the long run benefits all.

The problem of securing this proper balancing of individual and group prerogatives is usually spoken of as the problem of "discipline;" and certain management experts have even selected "shop disciplinarians." Words are subtle instruments; and it is our conviction that as long as managers think in terms of "discipline," they will be thinking and acting in terms of "you mind me"—of that favorite sign on the foreman's desk: "If you want to know who's boss around here, just start something."

This is manifestly the wrong note and it gives a false emphasis. For the management, in treating of disciplinary problems, is treating of matters in which the psychological element is large and almost all-important. The attitude is of critical significance. For attitudes on one side breed corresponding attitudes on the other. Arbitrariness and "firmness" on the part of the management give rise to "caprice" and "obstinacy" among the workers. Reasonableness, patience, sympathy—these oc-

¹ MILL, J. S. Considerations on Representative Government, Chapter II.

casation a response which is in the same temper. Hence the sooner the notion of "disciplining the shop" can be dropped, the better it will be. We shall, therefore, in this volume use the phrase "shop control" to connote the several matters of which this chapter treats—with the suggestion in passing that as soon as possible the word "discipline" should be dropped from the industrial vocabulary.

Shop Rules.—Every shop has a certain number of rules which it is in the common interest to adopt and adhere to. Such rules usually relate to the following subjects; attendance and records of attendance, safety and the observance of safety rules, health and the observance of hygienic precautions, matters of personal conduct like falsifying records, drunkenness in the shop, sex irregularities, profanity, fighting, stealing from the company or other workers, smoking, and special rules required by the nature of the work.

It is important to consider how such rules should be formulated; how they should be adopted; how workers should be acquainted with them; how they should be enforced—which involves the question of penalties and fines.

There are in the experience of many progressive plants three steps in the development of shop control. Originally the management formulated the rules itself and posted them on the bulletin boards. Presumably the workers read these rules; and continuance at the job was taken to mean their agreement to abide by them. This is, of course, the simplest way of achieving good behavior in the shop. It carries with it only one shortcoming. It does not assure such good behavior. It tends only to assure a nominal observance of rules, while the management is watching. Not knowing why existing rules are in effect, workers see no reason for inconveniencing themselves to carry them out. This method wholly ignores the training motive. The appeal is, implicitly at least, to the fear motive. And it has all the weaknesses that the appeal to fear usually creates—sullenness, stubbornness and desire to "get away with" infringements just for the adventure.

The second stage in the effort to secure effective shop control has been to give over to the personnel department the formulation of rules. This presumably results in a more mature consideration of the reasonableness of and necessity for such rules as are adopted, than is the case when no expert executive devises

them. Moreover, it supplies a method of transmitting rules to the workers, since it is a frequent practice to include all regulations in the employees' handbook, edited by this department, and given by it to every employee.

The third stage is to make the formulation of rules a subject for conference with workers in shop committees, or with labor unions if there is a collective bargain. Where either of these instruments of joint dealing exists, it forms the natural agency through which the problem of shop control should be considered. For it is only through the development of self-control and voluntary acquiescence in rules that permanent social control can be obtained. Indeed, so essential is some organized expression of the workers on these matters that if no shop committee existed, we should be prepared to recommend one if for nothing else than for this purpose of helping to draw up, adopt and enforce the shop rules, and to consider shop grievances and discharge.

The shop rules are, it should be remembered, the local ordinances of industry. And if their essentially legislative character is borne in mind, managers will come naturally to the following conclusions:

The character, scope and content of shop rules should be agreed to by the workers or their delegates. If such agreement is not definitely secured and the workers find any of the rules unreasonable, they will be restive under them and reluctant to observe them. Indeed, the mere fact that they are laid down by someone else is sufficient reason for many people to object to them; whereas they will willingly enough subscribe to even more stringent rules if they themselves have a hand in framing them. Sound government in industry, as elsewhere, is based upon the voluntary consent of the governed.

Rules should be as few, as simple, as reasonable as possible. They will thus the more readily command the loyal assent and observance of all.

Rules should be well advertised to all affected by them. No one method of publicity is alone sufficient. The bulletin board should be used; likewise the company magazine, the employees' handbook, inserts in the pay envelope, and patient verbal conferences with any illiterate workers.

Penalties imposed by rules should in the same way be made known to all and agreed to by all.

Finally, there should be some definite agency within the shop to which the employee can complain or appeal if he feels that he has been wrongly accused of breaking a rule, or that some mitigating circumstance warrants an exception in his case.

How should rules be enforced? The usual threat which is held over the worker's head is discharge. We shall consider this method presently. Some companies impose a fine for loss of tools or identification badges; in some plants an individual "progress record," is kept, and all breaches of rules are noted thereon. This record is then taken into account in determining pay advances and promotion. Other companies adopt a more positive policy and reward faithful observance of rules by an occasional half-holiday, a longer vacation or a bonus. In all these cases, however, the management acts as the sole judge.

With the growth of the shop committee idea, this procedure will tend to change almost automatically. For once employee representation exists, any interpretation of rules or imposition of penalty which is felt to be unfair, will be immediately taken up by the shop committee. This committee action has moreover its positive side in helping in the determination of ability and good conduct. For managers who proceed to individual ratings without taking account of workers' estimates of each other lose substantially. In reality the workers themselves usually know as much if not more than the management about the hour-to-hour attitude and worth of their fellows in the shop.

But, it will be said, to act in the direction of autonomy in the control of shop conduct would invite disorder and confusion. This might indeed be true if the management simply "turned over" the shop control to the workers absolutely. Yet even if it did, it is a truism that when people are given a responsibility they are likely to exercise it more vigorously upon themselves and their fellows than they would tolerate its exercise by another. Self-discipline can always furnish a more resolute and insistent control than discipline imposed by another. Self-discipline is, also, vastly the more educational. And it is on this ground that objections to a larger shop autonomy than is now usual is best met.

We are not, however, proposing here that the workers "run the shop." We are rather proposing that order, system and promptness be recognized as a common interest of manager and managed, and, therefore, a proper joint responsibility. And

the management must usually take the lead in bringing about a mutual recognition of the value of this common interest. But it must be leadership in a joint enterprise—the joint enterprise of assuring proper shop control.

“It is but poor education,” we are warned, “that associates ignorance with ignorance, and leaves them (the people), if they care for knowledge, to grope their way to it without help, and do without it if they do not want it.”

“What is wanted is the means of making ignorance aware of itself, and able to profit by knowledge; accustoming minds which know only routine to act upon and feel the value of principles; teaching them to compare different modes of action, and learn, by the use of their reason, to distinguish the best When we desire to have a good school we do not eliminate the teachers.”¹

In short, shop control is best secured when it is administered jointly and when the management assumes the role of apostle—but not fanatic—of law and order.

Absence and Tardiness.—Many plants today suffer a loss of production due to absence and tardiness which may exceed the loss caused by the turnover of labor. And unquestionably a careful effort to control these two items will be to everyone's interest.

Reduction of absence and tardiness requires, in the first place, knowledge of their causes. Such knowledge is not obtainable without a close check-up of each instance. This is secured in some companies by having each absentee and all workers who are tardy more than three or four minutes report for work *via the personnel office*—a practice which of itself has tended to reduce irregularities in attendance. And when, as is done in several companies, all delinquents are brought before a committee of workers, the amount of broken time is found to fall rapidly.

A procedure of absentee control should include an absence record sent by the foreman of each department to the personnel office within half an hour after starting time each morning. This record should contain the name of each absentee, and should as a matter of routine go in duplicate to the employment office, the nurse's office, and the planning department. Absences can thus be looked into before the worker returns, and the day's assignment of work be rearranged in accordance with the attendance.

Follow-up of absences involves, however, one of those delicate

¹ MILL, J. S., *op. cit.*, Chapter XV.

points of procedure in which almost everything depends on how it is done. A visit by a company representative to the absent worker's home on the first or second day of his non-attendance, may be a kindly and considerate act of inquiry and proffer of help, or it may be used in a most objectionable way as an occasion for prying into purely personal affairs.

We are not, therefore, prepared to discourage the practice of follow-up of absentees by personal visits. But the goodwill of the working class community will only be retained in the long run if the visit is made by a kind, tactful and discreet woman nurse whose natural first concern is a solicitude for the health of the absent worker. If the worker is not sick and if he or his family does not *volunteer* information as to the reasons for the absence, the nurse's work as an agent of the company should be considered finished. If the worker wants to look elsewhere for a job, if he wants to go shopping, if he has earned all he cares to in the week—that is his concern; although he stands of course to receive any consequences of unexcused and unexplained absence which may be jointly adopted and embodied in the shop rules. And it is also, of course, legitimate and often a necessary work of management to endeavor to educate employees into more responsible and more regular working habits.

A drive to reduce lateness and absence will usually disclose other remediable causes besides sickness. Bad transportation, unwholesome recreational provisions, poor housing accommodations with the consequence of poor sleep, too hard work, unhealthy and unattractive working conditions—these are all familiar contributing causes. And they demand simultaneous consideration.

Positive work in bettering attendance can also be done by giving conspicuous notice and public mention to those who are regular in attendance. By this sort of public record an emulative spirit between departments can be usefully encouraged. Much can also be done in the direction of encouraging workers to notify the company both of contemplated absence in advance or by telephone on the day of absence if it is suddenly required. Many companies, because of its beneficial effect on attendance, justify the provision and loan on rainy mornings of dry shoes and stockings, and on rainy afternoons of umbrellas and rubbers.

Attendance can at times be used as a factor in payment. But that such recognition should take the form of an attendance bonus seems to us an unduly artificial and permanently

unsatisfactory method of securing something which the management has presumably already contracted for—namely, the regular attendance of its workers. It is usually poor policy to give special rewards for fulfilling obligations which it is in the nature of the agreement to fulfill.

Full and regular attendance is like other items in sound management in that it is important but should not be a fetish. When managements do not send a sick girl home, when they send a "strong-arm" man to corral absent workers, when the worker who is a few minutes late is made to lose a whole morning's work, when sick employees are encouraged to return to work before full recovery—regular attendance which is really a means, is being unwisely made an end.

Moreover, it should be remembered that in some cases absence may be a physiologically sound "defense mechanism"—dictated by the worker's feeling that he is "fed up" on work and needs a change. Any company which pursues a firm policy on regular attendance should consequently be prepared to adopt the essential supplementary policy of regular holidays and vacations. For, although it is important to be able to count on the worker's presence when the shop is running, managements must realize that under present conditions regular attendance for 300 days a year is likely to be for the manual worker a severe physical tax.

Individual Delinquencies.—It is frequently true that some offenses and violations of rules are made the cause of absolute discharge. Definite and firm treatment of flagrant dishonesty, immorality and willful disobedience is certainly necessary. But it is especially important here to remember that a man should be tried by a jury of his peers; should have the chance to speak fully in his own defense; and should be considered innocent until his guilt is established.

It should further be remembered that the black-marking of a man for a first offense may debar him from securing employment anywhere in the locality. Justice may helpfully be tempered with mercy since the prerequisite of reform is not the moral aloofness of other workers and employers, but a disposition to give the delinquent another chance to make good.

Moreover, when any serious offense against the statutory law has been committed, the company should not forget that unless satisfactory adjustment is immediately effected, the State and not the employer is the one to see justice done.

Grievances.—It will perhaps seem odd to some that we do not give more conspicuous attention to the handling of grievances. But a reading of the chapters on shop committees and collective bargaining will show how really important we believe this question to be. And our suggestions for handling grievances are there embodied more extensively.

A grievance is an evidence of some temporary misunderstanding and maladjustment in the relation of the worker to the company. It can be treated in one of two ways. It can be ignored—in which case a sense of thwarted and suppressed desire tends to develop. The original cause of the maladjustment tends to be magnified or distorted and if other grievances occur before the first is corrected, a progressively intense, sensitive and unreasoning conviction of ill-treatment is fostered. "Certain specific grievances, when long uncorrected, not only mean definite hardships; they serve as symbols of the attitude of employers and thus affect the underlying spirit."¹

The second method of treatment is, therefore, the only safe one. Let in the light, air and sunshine upon all grievances! Keep the air clear and the atmosphere free of any vague uneasiness! And this can be accomplished in only one way: Have an organized channel of communication through which the worker can make his grievance heard with confidence that it will be promptly considered.

This organized channel will qualify as an effective medium to the extent that it has the workers' confidence and to the extent that it displays fairness. These two essential qualifications *may* be assured if the grievances are handled informally by the personnel department, or by some superior executive, especially if they are purely personal difficulties. But in the long run promptness and fairness are better assured under a joint committee of management and employee representatives, on which each side has equal voting power and the only appeal (if any exists on important points) is to some disinterested outsider.

The personnel department can play an important part, however, in collecting the facts regarding every grievance considered; and frequently it can effect a settlement of minor, personal frictions which need not take the time of a grievance committee.

When, however, the grievance concerns basic terms of employ-

¹ Report of President's Mediation Commission to the President of the United States. Washington, 1918, p. 19.

ment, its consideration should go at once to the special agencies for dealing with those matters which we are subsequently discussing in the chapters on job analysis and payment.

Especially in large corporate organizations, there are other complex and baffling grievances to reckon with. Both office employees and executives themselves should have someone to whom they can turn for the consideration of their grievances. Jealousy, pride of place, suspicion, ambition, taking credit for another's work—these are all such a source of waste, friction and heat in executive groups that some method of minimizing them should be sought. While it is probably true that a formal grievance-handling agency will be of little if any value, much can be done in a personal way to eliminate these difficulties, if the head executives, especially the personnel manager, will keep constantly in mind the need for freeing executive organization from irritations and disturbances of this sort.

Discharge.—No discussion of discharge can progress far which does not fully recognize how momentous an event discharge is to the affected worker. "So heavy a penalty as the dismissal of a workman (involving to him a serious dislocation of his life, the perils and demoralization attendant on looking for work, probably the uprooting of his home and the interruption of his children's schooling, possibly many weeks of penury or semi-starvation for his family and himself) ought to be regarded as a very serious matter."¹

It is therefore pertinent to inquire how discharge is handled and how it might be handled to assure fairness to both the interested parties. Four general types of procedure are in use. First, there is the old method of allowing the foreman full responsibility. But where personnel departments have been set up, they are rapidly supplanting the foremen.

Indeed, this second method has gained greatly in favor because in every instance known to us the number of discharges has fallen 20, 30, and in one plant, as high as 65 per cent. without any diminution of effective shop control being noted, *as soon as the power of absolute dismissal was taken from the foreman* and lodged in the personnel department. The foreman is too close to his workers, and not sufficiently in touch with the needs of the rest of the factory to allow him to have final say over complete discharge. He may still retain, however, the right of immediate

¹ WEBB, SIDNEY. *The Works Manager Today*, p. 30.

suspension and of dismissal from his department if the personnel department cannot persuade him to reinstate the man. For there is clearly nothing to be gained by having a superior executive force a foreman to take back a worker whom he does not want and will not treat considerately.

Another useful method is to allow no man to receive his final pay check until he has interviewed the personnel department and obtained its signature for his discharge. By this means conference with a personnel worker is assured. It enables him to look into the situation, and more often than not it is possible to put the man at work in some other department, if his offense has not been of such a character as to warrant his release.

Both of the above methods, however, imply that management alone is deciding upon the rightness of the discharge. But the same arguments which have force regarding the sound handling of shop rules and grievances would seem to have force in the handling of dismissal cases. For after all, discharge results from a breaking of shop rules and is one particular grievance which the affected worker has against the company.

A third method is, therefore, to have a joint committee pass on the discharge, in case the personnel department has found it impossible to revoke the decision of the foreman. It is assumed here that there has already been prior agreement between management and men upon proper causes for discharge; but it is also assumed that on matters of fact and interpretation the discharged employee should be allowed the benefit of a hearing and even of appeal.

In other words a first principle of standard practice on discharge is:

Establish in joint conference those causes of discharge which all parties agree it is equitable to enforce. These causes should preferably be few and specific. It is, therefore, desirable to define in advance of the offense, "wilful disobedience," "negligence," "incompetence" and "misconduct." If it is felt by all that breach of certain rules about attendance, safety practice, health measures, personal morality or some other aspect of shop conduct should be held as cause for irrevocable dismissal (assuming that the facts are fully established), it will not be difficult to get the explicit agreement of the workers on these points.

Some companies in instituting shop committees and employees'

associations have brought before the workers a finished plan of procedure with a number of causes of discharge (in one case as high as 25) already specified—and acceptance of the plan meant acceptance of all those causes as valid. A far better way is to provide in the constitution of the shop committee for subsequent joint agreement in committee on valid causes for absolute discharge—with perhaps a referendum of all the workers upon the committee's recommendations.

Where a collective bargain is in force, it will usually provide some joint machinery for consideration of discharge and will also in most cases state certain causes which are recognized as absolute. An interesting example of how this problem is met in order to guard the interests of both sides is seen in a recent agreement in one of the garment industries where the "right to discharge" had been in violent dispute. The contract provides that during the first two weeks of employment every worker shall be considered as on a "probationary period, and there shall be no review of the discharge of any worker during said period."¹ In the event of discharge "after said probationary period, the discharged worker shall be entitled to a review thereof" by representatives of the organized employers and organized workers, and failing agreement by them, by an impartial outsider. If the discharge is sustained no further action is taken. If it is not, several alternatives are open, which depend in part upon the length of service of the discharged, but include reinstatement or a "dismissal wage."² The important thing to note, however, is that the "right to discharge" is definitely restricted in the

¹ *Monthly Labor Review*, U. S. Bureau of Labor Statistics, June, 1919, p. 14.

² "(1) If the discharged worker had been employed for a period of more than two weeks, but less than four months, the employer is given the option of reinstating the employee or of paying him, in lieu of reinstatement, a dismissal wage or fine. The amount of the fine is to be fixed by the chief clerks of the respective sides or by an impartial person, but is to be not less than one weeks' pay nor more than six weeks' pay; (2) if the discharged worker has been employed for more than four months, the chief clerks or the impartial person (not the employer) are to agree whether the discharged worker is to be reinstated, or a dismissal wage or fine, in lieu of reinstatement, be granted to him (the amount to be granted is not to exceed six weeks' pay); (3) discharged workers are to be reinstated if it is found that they have been dismissed for union activity. Appeals from discharges for alleged union activity are, however, limited to members of price committees and the union representatives of the shop." *Monthly Labor Review*, U. S. Bureau of Labor Statistics, June, 1919, pp. 7-8

interests of fair play and of a decision free from heat and personal bias.

A fourth method of handling discharge is to turn its administration over entirely to a committee of workers. We know of only one company which uses this method—a department store; but it has been in use there for several years and testimony is unanimous that the results are satisfactory.

The machinery is simple. Every pay envelope carries printed on its outside a legend stating that if the employee feels himself unjustly treated in any way, he is urged to take the matter to the arbitration board. This is a body of twelve workers elected by their fellow workers and a chairman appointed by the president of the employees' association. One observer, confirming our own conclusions, says:

"The records of the board for a period of two years were placed at my disposal. I went over them carefully, paying special attention to cases of appeal against dismissal. Here, if anywhere, it seemed to me, there would be opportunity for decisions made without regard to the interests of the store. I found thirty-nine such cases; twenty-seven of them were decided in favor of the store. Only twelve discharged employees were ordered reinstated. When I read the proceedings in each case, I was struck with the conscientious and scrupulous effort to be fair to the store. A number of cases which, on the face of the records, seemed to me to be unfair to the discharged employee, were decided in favor of the management. Only where the employee's case was unusually strong was a reinstatement ordered."¹

Mr. Fitch's statement serves as an answer to the objection that the employees tend to be easy on their fellows. Quite the contrary is true, not only here but wherever employees have been trained in the assumption of real responsibility.

While not wishing to press the conclusion too strongly we favor a method of handling discharge through joint conference along the line of the third method discussed.

In conclusion, it will be seen that our suggestions for effective shop control grow out of an appreciation of the sources of true "good conduct" and orderly behavior. We stress the positive side of shop control, believing that if the management assumes its responsibilities adequately, the workers will assume theirs. Much depends on the attitude with which the management

¹ FITCH, JOHN A. Making the Bargain, The Survey, Dec. 15, 1917, pp. 316-319.

proceeds; much depends on having the organization of production so well in hand that the workers will normally "tend to business;" much depends on patient adherence to the training point of view.

To embark upon democratic shop control will seem at first a venture requiring extraordinary faith in human nature. But in reality it is not. It is rather a scientific step based on knowledge that self-discipline is the only kind which is permanently adhered to without resentment, that responsibility is only assumed when authority is specifically decentralized, and responsibility is, when exercised, an exceedingly sobering and tempering influence.

The shop, we must never forget, exists to provide a life as well as a livelihood. Hence, the objective of shop control is not the creation of an atmosphere of fear, gloom, whispering furtiveness and straightlaced uniformity. There is room in the truly orderly shop for cheerfulness, an atmosphere of fellowship and even of gaiety, for flexibility and individuality. In the shop, as in the community, the desirable aim is freedom through law.

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CHAPTER XVIII

JOB ANALYSIS AND JOB SPECIFICATIONS

It is important to be explicit as to why we give job analysis such prominence in a book on human relations in industry. We find at least four vital points at which the significance of job study cuts directly across the path of the personnel administrator's work; and how intimate the connection is can be most graphically indicated by four types of illustration.

There is crying need, in the first place, for scientific knowledge about a "fair day's work." In one tannery known to us the girls on week work at a certain operation finished seventy-five dozen skins a day. The management was confident that this was too little and, after consulting with the girls and assuring them of earnings at least equal to their week rates, changed the job to piece work. At once the output rose to one hundred dozen a day and has remained at that average ever since, apparently without any ill effects on the health of the girls.

At another factory a policy of limitation of output was enforced by one hundred and fifty men by collecting the pay envelopes of each worker to assure that no man earned over \$4.75 per day. Eventually conditions changed; restrictions were removed from the amount of work that a man could do in a day; and presently thirty men were turning out the entire amount and earning from eight to nine dollars a day.

In our shipyards early in the war the number of rivets driven per day was often considered low by employers, although there were clearly many contributing factors for which they were themselves responsible. Nevertheless the testimony is widespread that when the Shipbuilding Labor Adjustment Board announced that it would allow no cutting of piece rates during the war, the output frequently increased 50 per cent. and even 75 per cent. In Melbourne, Australia, a local paper recites that, "an ordinary day's work for a riveter, as work is done at other yards, is 295 rivets. The Cockatoo Island riveters fell to 75.

When the manager remonstrated with them the work per man increased on an average two and a half rivets per day."¹

The problem of defining the day's work presents itself likewise in the garment trades. In the manufacture of dresses and waists, for example, it has been customary for certain operations to be done on a piece work basis. The hourly rate is fixed by a collective bargain. The difficulty then is to convert the hourly rate into a piece rate which shall be fair to both sides, and give a weekly wage approximating that secured by multiplying the hourly rate by the number of hours worked per week. But if the employer undertakes a test to show how long the operation takes the temptation is to set a fast pace which could not be regularly maintained; and if the employees make the test the tendency is for the operations to be done slowly so that the fast workers can make good money. This problem occasions endless controversy, ill-will and unfairness. The need for some more scientific study of the work is obvious.

Second, there is need of accurate knowledge of the surrounding conditions and modifying factors at jobs. There has from time to time been considerable friction over terms of employment for street car motormen and conductors. Periodically in our large cities, the public confronts an interruption of work, and then begins to discover that the terms of employment or the attendant conditions are not what they should be. But there is no organized body of knowledge as to the exact work-content of the traction employees' jobs in a given city. We do not *know* accurately the over-all hours per day and per week, the weekly wage, the yearly income, the sickness liability, the average length of employment, the rapidity of promotion, attendant conditions in such matters as eating accommodations, rest rooms, toilet facilities away from the barns and numerous other items. And then when the public finds the workers restive it tries in a hurried, superficial way to get the facts and to have conditions corrected. This statement applies with equal accuracy to the work of employees of the steam railroads. The content of the work of the engineer and the fireman on different types of locomotives shows a wide divergence; yet little is generally known about this by those who attempt to arbitrate railroad wage disputes. The need, of course, is for job analyses kept currently correct, and accessible for public enlightenment.

¹ *Melbourne Argus*, Feb. 13, 1919.

An illustration of a third type is found in a certain cotton mill where the owner has an inventive friend who has free access to his mill for purposes of experimentation, on condition that the owner have the free use of any available inventions. The inventor spends days and days in the observation of a given job and gradually as its elements become clear in his mind, he sees the way in which a machine could be devised to do the work, and do it more quickly. He installs a crude model and in conjunction with workers and mechanics gradually brings it to perfection. In one case the result was a contrivance which saved the work of four people for every machine used. This simple example from an industry in which operations are thought to have reached a high degree of standardization, testifies to the need of widespread study of possible improvements in machine and method.

Fourthly, the importance of knowing the effect of work on workers is too often ignored. We have been in plants where the conditions surrounding a given job plus the content of the job itself were such as to have an obviously deleterious effect on anyone who remained longer than a few weeks. In one factory, in the department that was doing a bronze bath operation, the foreman had to leave for a month regularly every five or six months in order to recover sufficient health and strength to continue at work; and no worker was ever known to stay at the operation more than three months. And yet that condition had gone uncorrected and unstudied for a number of years.

These examples could be multiplied by the score out of the experience of every employment executive. They are, therefore, used here only to emphasize these four points: First, that there is today no definite agreement as to how much work is to be done for an agreed amount of pay; second, the present lack of knowledge about work-content; third, the essentially dynamic and changing character of industrial processes; and fourth, the failure to pay attention to the effects of work on workers. Our illustrations are not cited here, it should be noted, to prove anything one way or the other about limitation of output, the installation of labor saving machinery, or the shortcomings of employers or workers. These questions will be considered in due course. We are rather interested to show how this fact of change in process and this need of knowledge, must bring the technical manager and personnel manager into working alliance.

Our conclusion can for brevity's sake be reduced to two syllogisms:

1. Agreement upon terms of employment should, in order to assure fair treatment to every interest, include agreement upon the meaning and content of a fair day's (or week's) work.

To get a basis for such agreement, job analysis is necessary.

But determination of the management's policy as to terms of employment is in substantial part a responsibility of the personnel administrator; therefore,

The work of job analysis should be shared by him.

2. Changes in process and in production methods are constantly required either to increase production, to lower costs, to improve quality or to protect the health of the worker. There is no job so perfectly standardized today that it would not lend itself to beneficial changes in one direction or another. Changes in process are inevitable.

But when such changes come they almost always involve some personnel problem—either in the acceptance of a new way of doing the job, in which case training is necessary; in the shifting of workers between jobs; in the substitution of a machine for workers; or in some other way. The handling of the *personnel* aspects of the change in process or method is an important part of the change—indeed, after a certain point of knowledge as to the desirability of the change is reached, *the* most important part.

Hence, to assure successful handling of the transition, *the personnel department should take an active part in the reaching of decisions about changes in job content and in putting them into effect.*

It is essential to the clarity of this chapter that this point be firmly established. The time has, of course, passed when employment administration can be conceived as an extraneous appendage of the management, which works by itself on separate and unrelated matters vaguely designated as "personnel problems." No such artificial line of demarcation exists. Executive work either contributes to the task of economical and efficient production, or it does not. The work of production has two parallel and constantly interrelating aspects; the aspect of plant and process; and the aspect of people as applied to the plant and process. And until corporations are ready to admit that the work of employment administration is fundamentally one indispensable half of the job of management, they will miss its real

significance; their personnel managers will be ineffectual in action, and will be subordinate to, rather than co-equal with, the manager of process.

And it is through the agency of job analysis, when rightly conceived, that the administrator of personnel can get his most natural and most effective *liaison* with the administrator who is engrossed in technique and process. How this can come about we shall presently consider. We want first to be clear that the justification, both financially and from the point of view of scientific business organization, for a real staff personnel executive lies in his ability to relate his efforts directly to those of the technical executive. *And one of the most logical points at which that justification can be established is in the work which job analysis entails and implies.*

That the personnel department should participate in job analysis seems to us, therefore, an inevitable conclusion; and the foregoing discussion of its uses must at the same time have made clear how important are the questions with which we are here dealing. We come next to consider in detail what job analysis is, the purposes for which such study is needed, the facts which it should include, how the data can be secured and how applied.

Definition.—What, then, is job analysis?

Job analysis is a scientific study and statement of all the facts about a job which reveal its content and the modifying factors which surround it. The job is the molecule of industry; and what molecular study has done for physics and chemistry, job study with the aid of every possible instrument of precision can begin to do for industry. Hence, there is need of a method of study for a job, just as we shall presently see the need of a method of factory analysis. Managers need to know what elements to consider and how to relate them. Job analysis if it is to be scientific must eventually supply a systematic, exhaustive, orderly and approximately standardized technique of procedure. Already notable advances have been made, but the work is still in the primary stages.¹

The ensuing discussion will be clearer if we next consider the

¹The Outline of Job Analysis, a pamphlet published by Valentine & Gregg, New York, 1918, is the most comprehensive attempt at an all-round procedure which has come to our attention. Our personal association with this work warrants the assertion that the practical uses of this procedure are many, and the results obtained from its use of significant value in laying bare the subtleties of an operation. We gratefully acknowledge the appreciable assistance of this pamphlet in the preparation of this chapter.

purposes for which job analysis is needed. For the extent of any given analysis depends upon the purpose which it is to serve, the uses to which it is to be put. If, for example, the employment office wants only enough data for the drawing up of a job specification, it is not necessary to proceed to the length that is necessary if workers and managers are attempting to agree on a fair day's work.

Our discussion of the purposes of job analysis will be divided into three parts in order to indicate the values of its use to employers, employees and the public.

Value to Employers.—(a) To standardize an operation. For the management, job analysis is needed to determine the best methods of carrying on a job under existing conditions. This may be desired as a basis for planning, scheduling and routing the work through the plant; since clearly any organization of the flow of work cannot be perfected until the time of each operation, the material required, the sequence of the process, etc., are known.

It is this aspect of job analysis which was first popularized by Frederick W. Taylor. All honor is due to him for insisting upon the necessity of knowing the content of a job if truly scientific management is to be installed. Indeed, all subsequent work in this field is built upon foundations which he laid. But the subsequent work, although from one point of view it may seem relatively slight, is of pivotal importance. Taylor's conception of job study erred on the side of too great objectivity; that is, study of the job as an entity off in space by itself. The subjective factors—the attitudes, opinions, hopes and fears of the workers—were not sufficiently taken account of; nor was sufficient emphasis placed upon the effect of the work on the worker as a human personality. And finally, the question of the control and application of the accumulated data was not solved—or even, it may fairly be said, candidly faced. Nevertheless, no discussion of job analysis is complete which does not acknowledge the pioneer work of Mr. Taylor in giving substance to this concept.

Furthermore, where job analysis has involved the use of the stop watch, there has been a development of technique by men more or less closely identified with the Taylor group which is elaborate, systematic and painstakingly scientific. All work of job study is thus under a debt to those who have elaborated the time study technique and used it in honorable and dispassionate fashion.

(b) To improve an operation; that is, to study to devise ways and means of doing the work more quickly and better—with less effort, less fatigue, less cost. Pioneer work has been done here especially in relation to motion study and fatigue study.¹ But here again the tendency has been to be too objective, not taking the worker sufficiently into account and not trying to get from him his suggestions as to improvements.

Unquestionably, one of the most potent stimuli to job research should be the demand for higher productivity. It is here, with the dynamic problem of proficiency, productivity and low unit costs, that job analysis gets one of its strongest reasons for being; and relates itself closely to production and to personnel. If the attitude which the factory should seek to encourage in relation to process and people is one of growth, development and improvement, the practical channel through which that attitude should be capitalized is job analysis, made and used, of course, under those fair conditions of control to be presently discussed.

(c) To define responsibilities. We often find, as every consultant does, that there is extraordinary confusion as to responsibility over jobs. Study should determine who is and who ought to be responsible for having material on hand, for machine maintenance and repair, for removing finished material, etc.

(d) To provide a statement of sequence of operations at a job. Training cannot be carried on most effectively until the instructor knows all the elements in the operation and their sequence, and can judge whether or not the normal order of procedure at a job is the best pedagogical order. If, for example, the first thing the worker has to do is the most intricate element in the operation, he should not usually be taught that first. But, in any case, the instructional value of seeing a job in its constituent parts is great, and this statement of sequence of operation should be one part of the finished analysis.

(e) To secure the data on which to draw up a job specification. It is useful to know what the demands of a job are upon the worker in point of training, aptitude, temperament, and in fact all the necessary qualifications.

¹ See GILBRETH, FRANK W. Motion Study, Fatigue Study, Applied Motion Study. See also P. SARGANT FLORENCE. Use of Factory Statistics in the Study of Industrial Fatigue. Also Report of U. S. Public Health Service, How Industrial Fatigue May be Reduced. Wash. Govt. Print. Off., 1918, 12 p. (Reprint No. 482.)

(f) To know the amounts of output produced by workers of different degrees of skill. As we shall see presently, this data can be of great help in narrowing the range of the discussion as to how much work should be expected in a given period.

(g) To know the effects of work on workers. It is essential for industry and for the community that we get more adequate records of the effects of work on the worker, in relation to fatigue, special strain, accident, occupational disease, occupational neurosis, predisposing causes to non-occupational ills, etc.

The immediate value of discovering ill effects of work will show in reduced labor turnover and in a more cordial working spirit. There is, moreover, a crying social need for such material as a basis for legislation and state regulations.

(h) To coordinate all jobs more soundly. On a basis of knowledge of successive jobs, problems dealing with cooperation between departments, gaps in responsibility, inadequate inspection and other features of bad coordination can be discussed and solved.

Value to Workers.—(a) To make work run more smoothly and easily. For the workers job analysis is of value in helping to assure a well-organized flow of work. This is the obverse of the statement that proper coordination and clear assignment of responsibility benefit the employer. If the worker, especially on piece work, has to wait for material, or if it comes to him in bad form or with defective workmanship, it increases appreciably the difficulties and unnecessary annoyances of his own job.

(b) To increase productivity and thus increase the workers' earning power. This statement must be made with caution and with the reservation that job analysis will not necessarily have the effect of increasing the workers' immediate earnings *unless the use of the analysis is under joint control*. But, as the 1919 annual report of the American Federation of Labor points out, such study is needed since "the increased productivity resulting from scientific research is a most potent factor in the ever-increasing struggle of the workers to raise their standards of living, and the importance of this factor must steadily increase since there is a limit beyond which the average standard of living of the whole population cannot progress by the usual methods of readjustment, which limit can only be raised by research and the utilization of the results of research in industry." This resolution points un-

erringly to the simple yet fundamental economic truth that more cannot be divided than is produced. After a certain point in increased earnings of workers is reached (under any system of ownership), further enlargements entail greater production. And we are not without evidence that even under the present system of ownership, there will universally be greater comfort if there are more goods to distribute.

(c) To show the effects of work on the workers. As a necessary measure of self-protection workers should have all the knowledge possible about the physical effects of work; so that they may be better able to demand a reasonable length of working day and week, protection at work by better conditions and protective devices, and elimination of special fatigue or occupational disease hazards.

(d) To give a fact basis for agreement with the employer on fair amounts of output.

This is really the same as (f) above. All facts as to how much work is done and can be done, which will narrow the discussion as to how much work ought to be done for a given amount of pay, will help to put all the cards on the table, save time and temper; and assure a more scientific decision.

Value to the Public and Consumers.—(a) To get data on which they can help to settle disputes between managers and workers.

The public and the consumers are rendered impotent by ignorance. In so far as arbitration is a public function, it can be pursued intelligently only as all the facts about the job in question are accessible. Analyses obtained by the use of scientific methods could supply this data, if only properly constituted public bodies were available to do the research work.

(b) To get data on which to help to set up universal protective standards.

It is only as we have the facts as to injurious effects of work on workers that we can get legislative bodies to work most rapidly in enacting hours-of-labor legislation, safety and sanitation laws, etc. The briefs of the National Consumers' League in behalf of the eight hour day, abolition of night work, and a minimum wage, are the most advanced attempts to mass relevant knowledge thus far available; but we can confidently assume that a greater and more specific body of material secured from actual job analyses will provide even more formidable arguments for the conscien-

tious consumer to use in his efforts to establish wholesome industrial standards.

(c) To give publicity to unwholesome conditions.

Publicity regarding conditions and terms of employment at jobs which are "affected with a public interest" (and what jobs are not?) vacillates between muck-raking and dull statistical abstracts. A properly drawn job analysis should serve as a model for the kind of scientific yet pitiless publicity which it should be possible to obtain where conditions are especially in need of correction. The therapeutic value of publicity is so great that communities should be able to make use of some instrument at once graphic and accurate. Job analysis should be this instrument.

We have established, it would seem, a strong case in behalf of job analysis for a variety of useful purposes. In the present study we shall tend to confine the discussion to problems arising where the management takes the initiative introducing it—not through desire to minimize the workers' or public's interest in job analysis—but simply because of the limitations imposed by the purpose of the present volume. The next question, is, therefore: What is the subject matter and the topics which the analysis should cover if the several uses of it, as above stated, are to be made? For a rounded job analysis is obviously a body of knowledge from which many special subjects can be developed, a quarry of information from which facts can be extracted for several purposes.

Content of the Job Analysis.—The matter to be included in a job analysis may be conveniently divided for purposes of clear statement and ready reference into several topics. The discussion of these topics contained in the job analysis as initially drawn up *is confined to a statement of facts*. It will eventually be desirable to draw certain conclusions from these facts and to make certain recommendations as to advisable changes. The subjects to be treated in the job analysis may be grouped under the following headings:

- The Job Itself
- Qualifications Necessary in the Worker
- Sequence of Operations
- Effects of the Job on the worker
- Relation of the Job to the Organization
- Relation of the Job to the Community

The Job Itself.—Under this head the relevant information regarding the actual content of the job is included. It may conveniently be subdivided as follows:

1. *General Description.*—This should be a brief word picture of the job as a whole and its relation to the other processes. It is desirable to have this accompanied by photographs of the job in operation.

2. *Machinery.*—Under this head the machinery at the job should be described and the necessary questions answered as to how it is maintained, etc.¹

3. *Tools and Equipment.*—It is necessary to know all tools and special equipment (such as boots; aprons, goggles, etc.) which are used at the job; also how these are provided and maintained.

4. *Materials.*—Especially important is it to determine whether materials are (a) in the right place; (b) in the right condition; (c) at the right time; and (d) in the right quantity; and whether (e) they are properly removed.

5. *Motions.*—What are the motions? Are they necessary? Are they the best? In order to answer these questions with scientific accuracy it may in some cases be necessary to have access to the kind of apparatus devised by Mr. F. W. Gilbreth.²

In this connection, too, it is important to consider the characteristic postures required for the work; and the parts of the body most used.

6. *Times.*—Under this head should be stated all the facts about hours and working periods which we have discussed in Chapter VII. Also the results of actual elementary time studies with the stop-watch; analysis of the time allowances for rest, delays, use of toilets, etc.; and recommended over-all times for the job by (a) the best workers; (b) the good workers; (c) the medium run of workers; and (d) learners or apprentices.

This will be one of the critical chapters in the analysis, especially if the purpose is to get data which will serve as a basis for subsequent agreement with workers regarding a fair day's work.

7. *Records.*—It is important to know what records there are regarding the job—records of quantity and quality of output, amounts of waste and seconds and rejects, unit costs, machine

¹ For suggestive detail as to questions under all the topics to be covered see Tead & Gregg, *Outline of Job Analysis*.

² See his *Motion Study*.

hours in operation, power consumption, etc. It is further valuable, as we showed in Chapter XV, to state what access employees on the job have to these records, and in what ways they could be so compiled as to increase the worker's interest.

8. *Standards of Output.*—This phrase is used to express the maximum output which it would be possible to obtain *with present machinery under the best available shop conditions and shop organization.* Our experience shows that it is always useful for the whole organization to know what output a job could show if all surrounding conditions were kept as right as is humanly possible. This supplies a standard for the organization to work toward. It should *not* supply a "pace" or "task" or a basis of piece-price fixation; for it is not the worker alone who can contribute to the approximating of this ideal standard. The quality of the material must be right; the machinery in smooth running order; the material delivered in correct manner; conditions of light, ventilation, etc., satisfactory; the workers carefully selected, etc. And to assure these conditions able management is essential.

This standard is, we repeat, based on a utilization of existing machinery and equipment. The analysis required to determine it may, and often will, show the possibilities in new machinery and processes; but at any given time *a standard will indicate the potentialities of the going enterprise.* It should offer an objective for improved plant efficiency.

9. *Amounts of Output.*—The only fair basis for a decision as to the amount of work to be expected in a given time is the rate of output under existing conditions. (Of course, as those conditions are corrected or improved, the amounts of work will change also.)

It should always be borne in mind in discussing this problem that it has two separable although related aspects. First, there is the amount of work which in a week of a given number of hours, workers of different degrees of skill may be expected to do. This is discussed in the present chapter. And, second, there is the question of the amounts of pay they are to receive for that work; which is discussed in Chapter XXIV. It is our conviction that useless and endless misunderstanding and confusion about work and pay will be removed only when industry is prepared to enter upon a study of these as *separate problems.* The first—determination of work—is a problem largely (although not wholly) in the realm where science and exact knowledge can throw clear light;

the other—agreement about pay—is largely in the realm where the securing of a temporary equilibrium of economic forces and interests is the determining consideration.

In the study of amounts of work it is important to know the quantity of output at the same operation by workers of different degrees of competence. While a differential in pay for differences in competence at a job is not under all conditions an essential feature of a sound payment plan, we are inclined to favor it—provided it is used under the proper conditions of control discussed in the next chapter and in Chapter XXIV. And in order to determine this differential on its work side, data should be available not simply to show an “average output,” but to show over as long a period as will give comparable results, the output of all the workers.

10. *Pay.*—The hourly or piece rate, the weekly wages and the annual earnings should be stated here; also all factors which enter into determination of wages—such as length of service, age of worker, cost of living, etc.

Qualifications Necessary in the Worker.—This section should include a statement of the general and particular mental and physical characteristics and special abilities which the job calls for.

Sequence of Operations.—This is a simple written statement in chronological order of the motions and activities required in carrying out the job. It is in effect a standard practice sheet.

Effects of the Job on the Worker.—This is a statement of the physiological, psychological and moral effects of the work on the worker in so far as they are discoverable from records, observation, personal inquiry, etc.

Accident and sickness records, records of periodic physical examinations of workers at the job, records showing distribution in quantity of production through the day and week, labor turnover records for the job, length of service records, absence and lateness records; all these will tell something of the effect of the work.

Relation of the Job to the Organization.—In this section the job analyst will consider the foreman’s connection with the job, the coordination of the flow of work, the reflection of general policies like sales and finance upon the job, the general working conditions and service equipment, and any other related factors, not inherent in the job itself.

Relation of the Job to the Community.—It will occasionally be necessary to swing out into the wider arc of the community to discover contributing causes which affect the job. Where such factors play an important part, a full understanding of the job makes their statement imperative for scientific thoroughness.

Job Specifications.—The principal derivative from job analysis, which it is useful to discuss further, is job specification. Our discussion of selection assumed that this specification was in the hands of the interviewer, and obviously it is important to consider what information the interviewer needs in order to make his work most successful.

Careful study of existing and proposed forms leads us to suggest the following topics as necessary for consideration on most job specification cards. From such a list, the special qualifications which it is requisite to check for any one job can, with a little study, be selected.

The job specification form should show:

A. *Qualifications Necessary in Worker*

1. Physical Qualifications

Age	Sensitiveness of hands
Height	Hearing
Sex	Sight
Length of arms and legs	Cleanliness
Size of hands and fingers	Part of body most used

2. Mental Qualifications

Education

Previous experience required

Ability to:

Speak English	Read to scale
Read English	Use gauge
Write neatly	Use micrometer
Calculate	Set up work
Read blueprints	

Type of mind:¹

Mental	Manual
Settled	Roving
Indoor	Outdoor
Directive	Dependent
Large dimension worker	Small dimension worker
Adaptable personality	Self-centered personality
Deliberate	Impulsive
Dynamic	Static

¹ See SCHNEIDER, HERMAN. National Association of Corporation Schools, *Bulletin* No. 7, 1917.

B. Nature of Work

Name of job	Quick
Name of machine	Slow
Name of foreman	Rough
Heavy	Finish
Medium	Coarse
Light	Fine
Bench	Exacting
Bench machine	Repetitive
Trucking	Varied
Accident hazard	
Location of job	

C. Conditions of Work

Standing	Greasy
Sitting	Permanent
Walking	Temporary
Stooping	Overtime
Clean	Humid
Dirty	Hot
Wet	Cold
Dusty	Fumes
Odorous	Acids

*D. Length of Time to Learn**E. Rapidity of Advancement and Chance for Promotion**F. Terms of Employment*

Starting rate
Regular rate: P. W. or D. W.
Average weekly earnings
Hours per day
Hours per week
Expected amounts of work

G. Methods of Measuring Individual Progress at the Job

For purposes of presentation to the worker, the check-up of these items should constitute an understatement of the job's possibilities rather than the reverse.

The content of the specification itself can usefully become subject for the consideration of the job analysis committee, although once that committee has approved the finished analysis there will be few points in the specification not already previously agreed to. The benefit of this conference will rather be the indirect educational one of having the workers at each job realize that there exists a defined body of standards for admission to that job. And it will be helpful for ambitious workers to be able to learn the necessary qualifications for jobs to which they aspire and for which they desire to equip themselves.

Selected References.
(See end of following chapter)

CHAPTER XIX

THE SUPERVISION AND CONTROL OF JOB ANALYSIS

If the data necessary to make the job analysis a serviceable instrument has now been correctly enumerated, we should next consider how it can be most readily and accurately secured and utilized. These two tasks cannot in practice be separated. For the work of getting facts to which all the interested parties will agree, and the subsequent work of using agreed facts as the basis for securing agreement upon those working terms which the analysis has tentatively proposed, are two halves of one project.

The "utilizing" of job analysis is fundamentally the using of its fact data to obtain practical standards regarding amounts of work to be done at a job, its quality, standards of cost and wastage, and working hours and periods.

And the "adopting" of job analysis, which we shall presently discuss, means, in our use of the term, the *formal acceptance* by the interested parties (1) of the facts, (2) of standards on the above four items, and (3) of those standards (or modifications of them) as the basis of the working contract.

It seems clear that these tasks of study, agreement and acceptance will be most safely and soundly carried on if the directly interested parties all take a hand in the reaching of decisions. This implies, of course, that the workers themselves will in some way have a voice in the study—a conclusion which has much significance and deserves careful scrutiny.

Enough has been said to show that certain of the facts in the analysis could be used to the detriment of the workers; could be used as a basis for more systematic exploitation; could be used to increase the insecurity and monotony of their work.

Workers have always tended to resent attempts to deprive them of their monopoly of craft knowledge by putting it into writing, and by modifying operations in the interest of more rapid training or performance. They have feared studies of output because of the familiar experience of speeding up and

rate-cutting. They have feared studies which would lead to labor-saving innovations because frequently this has resulted in unemployment for some of their number. Job analysis made by management and in the exclusive interest of management they fear; and they are justified in fearing it.

But job analysis is *not* properly a device of exploitation. It is rather an instrument; an instrument of precision; an instrument for the gaining of exact knowledge. Like any other instrument it may be abused. The fine edge of the surgeon's knife makes of it an excellent weapon for the murderer; but the world does not hold that against surgeons' knives. And of job analysis we can confidently say that its use is essential; *but that genuine social benefit will come out of it only when there is joint control by workers and managers (and eventually by the public as well) both in the making of the analysis and in its application.* Used jointly as a basis for inquiry and as a basis for adjustment of differences over amounts of work and pay, job analysis can bring knowledge and insight into play where prejudice and opinion have heretofore dominated. But used by the management alone, it at once creates risks for the management and dangers for the workers. Whenever in this volume we urge the crucial importance of job analysis, it should be distinctly understood, therefore, that we mean *job analysis under joint control.* This statement will serve also to make clearer our reasons for believing that the conduct of job analysis is logically a function in which the personnel department should share. Job analysis stands at the vital cross-roads where technical and personnel facts meet and interpenetrate.

This being so, the logical place for employee cooperation and group action to take place is *at this cross-roads.* If the management wants interest in work, if it is dissatisfied with quality, if it feels cheated on the quantity of work done—*the place to attack these problems is at the point where knowledge and intelligence can offer the basis for common discussion, agreement and joint action.* We do not say that shop committees should necessarily first consider the problems that center around job analysis. *But the shop committee that is to interest itself in matters of fundamental importance will have to concern itself sooner or later with such study.*

Moreover, when a company has reached the point where it really sees the necessity of job analysis to bring its production organization up to concert pitch or to keep it there, the time has

by that token come when the manual workers should be consulted. And the carrying on of the job analysis and the applying of its findings, form the sensible and invaluable subjects upon which that consultation should occur. It is only as employee organizations interest themselves in job analysis, and as progressive managers take the workers into camp on problems of job standards, that there exists any organic unity in the production mechanism. There is much loose talk about "cooperation" in industry. But there is one, and perhaps only one, kind of cooperation which is essential—since without it goods are not efficiently made. That is the cooperation of managers and manual workers to get out an agreed amount of product of an agreed quality at an agreed cost within an agreed time. There may be friction, delay, divergence, controversy over *what is to be agreed*. But once that agreement is reached, and as soon as it is reached, hearty cooperation becomes a valid objective.

There will surely be doubt in some minds, however, about the wisdom of giving employees a voice in the work of job study. This objection is one which we have no disposition to ignore. We are, of course, assuming that the analysis is to be secured not only in order to have certain information on hand, but to afford a *basis for agreement as to improvements in process and as to amounts of work to be done at a job in a specified time*. If this is the case, there are certain attendant values in having the workers' participation to which it is essential to call attention.

First, the workers must know that such study is contemplated and know how it is to be used. As already pointed out, suspicion will be at once aroused if they are not taken honestly and completely into the management's confidence from the start. This can be naturally and helpfully done only in a meeting with those at the job, at which the whole implication of job analysis is made clear to them and they are then asked to select representatives to consider the study further.

Second, they have information about the job which no one else has. And there is no way to get this short of having them present in the councils.

Third, the workers' interest is aroused by the new point of view and new problems to which job analysis calls attention. *The job analysis conferences should be one of the most interest-provoking occurrences in the entire operation of the factory.*

Fourth, workers will agree to adopt a standard sequence of

operations only as they are convinced and agree that the standard way is the best way for them to do the job.

Fifth, workers will agree to the amount decided upon as a fair day's work only as they have a hand in determining it. Experts can compile figures about a fair day's work till doomsday but until workers agree to do certain amounts of work, production will tend to fall far below management expectations. We should always remember that within limits it is in any case the workers who determine the amount of output. Managements may think the output less than a fair return for the day's pay. Workers may think their output more than they are getting paid for. Frequently that is the situation; and it exhibits the two parties at complete cross-purposes. As a result, the amount which the rank and file of the shop tacitly agree to perform as a day's work becomes the normal day's output.

And all that we are here proposing is that *this negotiation about the amount of work be consciously undertaken and organized, with both sides in possession of the facts; rather than be covert, underground and unacknowledged as an issue, as it usually is today.* When both sides know, and know that both sides know, what men of different degrees of competence can fairly do in a day or week, the effort to agree as to how much they *will* do, is a much less difficult undertaking.

Indeed, the next great step ahead in the more effective organization of industry is collective bargaining, first about work and second about pay. The objection will naturally be urged here that if in the last analysis the amount of work is to be bargained about openly, there is no value in an extensive study of the facts, since the determining factor will be the relative bargaining power of the parties at interest. It should be clear, however, that there are degrees of intelligence in bargaining, degrees of wisdom in claims and counter-claims, degrees of expediency in demands. Since this is true, and apparently always will be, the value of job analysis as a basis for bargaining is not only substantial—it is becoming today indispensable.

Sixth and finally, all the facts established in the job analysis are not capable of exact statistical measurement. Matters of opinion must sometimes necessarily have weight; and wherever this is true, the opinion of those most directly involved—the workers—is certainly important, perhaps even more important than that of anyone else.

There are, therefore, fundamental reasons for having the workers "in on the ground floor" when the job analysis is being made. And only as they are a party to it, are they a party to the really vital decisions of the plant which affect them. The consent of the workers, if it is to be secured at all, starts at this point where methods and amounts of work are decided. And because this is true, it is at this point also that the springs of interest in work are genuinely tapped.

The Machinery of Control.—Part of the objection to joint control of job analysis arises from a misconception of the part the workers will play in it. We shall, therefore, next consider the machinery of control and the machinery of execution. The validity of the case for some more or less definitely organized group which will have the supervision of job analysis as its function, seems to us clear. Yet our proposal in this connection is to be taken as suggestive rather than as a fixed and static scheme of structure. If, then, it is agreed that the vitally interested parties should get together when any job is being studied, will not the following functionaries be involved?

- (a) A representative of the technical management.
- (b) A representative of the personnel management.
- (c) A representative of the head of the department.
- (d) One or more representatives of the workers at the job in question.
- (e) A representative of the employees as a whole.

The inclusion of each of these representatives is determined by his having a special interest, point of view and knowledge. Job analysis which is to be accurate in every particular must, we have seen, include the material available from every quarter—and there is usually need for *formal representative conference* in order that the different parties may actually check each other up on the spot and get the educational values which such an interchange inevitably affords.

We propose that this group be known as the Job Analysis Committee, and that the work of supervising the job study and of finally "adopting" the analysis be delegated to it. The actual work of observation, analysis of records, and the initial compilation will then be largely in the hands of a job analyst whose work we shall presently consider.

But a further objection is likely to appear at this point: Our proposal involves the creation "of just one more committee." "They will spend so much time discussing," it may be said,

“there will be no time left to work.” There is no doubt an element of truth in this objection. But it is becoming clearer as the world’s experience with representative institutions grows that *a part of the price of honestly representative government is the consumption of sufficient time in conference to enable the representatives to get at the facts, compose their differences and decide upon a course of action.*¹ If it is said that in industry this is too high a price to pay, the answer is that without it the consent of the workers will be a reluctant consent and their interest will not be aroused. Fundamentally, efficiency depends upon interest and consent. And job analysis under joint guidance instead of meaning merely one more committee is the *indispensable technical instrument for assuring that efficiency.* There may indeed be too many committees; but if there has to be a choice, the committee on job analysis is the one which the progressive plant can least afford to drop.

The Job Analyst.—In large plants there will be, as a joint division of the production and personnel departments, a research bureau. And the members of this bureau will be the job analysts, time study experts, “efficiency experts,” etc.

The job analyst himself should be a technician who combines the qualities of human insight, scientific temper and a sense of mechanical ingenuity. He will know in detail all the topics which his study must cover; and will utilize every means—interviews with staff experts, foremen and workers, observation, study of records, use of a time study expert, etc.—to get the necessary data. The work is thus peculiarly exacting in the type of person required. For he should combine an agreeable personality with a ready understanding, tact, patience and ability to put his findings clearly into writing. It is highly important that this expert qualify fully on the side of ability to get along with people, ability to see their point of view and put himself in their place. His reception will be cordial in proportion as he adopts a *learning* attitude, is receptive and a good listener. It is only fair to himself that he indicate to foremen and workers that at the job in question they and not he, are the experts. After as long continued study as is necessary to get accurate, inclusive and convincing data (this may mean weeks and months at certain jobs), he should put his analysis *into writing.* Gaps in knowledge are never so evident as when data is fully written out under a topical

¹ See discussion of objections to shop committees in Chapter XXIX.

arrangement. And continually throughout his work, after initial deductions are made, he will save himself trouble and misunderstanding if he goes over his findings with foremen and workers before presenting the completed data to the committee on job analysis.¹ The ground covered and the subject matter of his report we have already considered in discussing the content of a job analysis.

But it remains to consider how this material is to be used in order to secure agreement upon the four points which are to be taken to define a standard of achievement at each job:

- (a) The amount of work to be done in a given unit of time.
- (b) The quality of work to be accepted as satisfactory.
- (c) The cost of the work—considering all factors but pay rates.
- (d) Time element in regular attendance.²

Consideration of each of these four items will help to show how the adoption of the job analysis is prepared for.

Use of Collected Data.—The amount of output of an individual or of a group is presumably known from past production records and recent time studies. With this knowledge in hand it then becomes necessary, *if the job analysis is to be used as a basis for conclusions about the content and terms of work*, to decide:

1. What the time unit is, in terms of which the output is to be measured and determined. Shall it be an hour, a day, or a week—or an even longer period? Generally speaking the hourly unit is far too short as a basis for study and for setting a rate of output as well. It does not make proper allowance for fluctuations in output through the day; it keeps a too constant drive before the mind of each worker who tends always to be asking himself: "Am I getting this hour's stint out on time?" Where such worry exists, real efficiency is reduced. If a day of a stipulated number of hours is used as the unit, that will at some few jobs be found satisfactory.

But usually we should prefer to see *output measured and agreed upon in terms of the individual's or gang's week's work*. That gives a unit of measurement in which the worker "has time to

¹ See Job Analysts' Introduction Card in Outline of Job Analysis, p. 10.

² It should be explained that the illustrative detail of the following method of joint job study presupposes that the operation is a fairly regular machine job. But *the underlying principle of joint study and agreement on certain standards of work is applicable to nearly all jobs with some modification.*

turn around." If one morning's work goes slowly, the next morning's may go better after the worker has a full night's sleep. If it is hot for two days, the end of the week may be cooler, etc. The variables which influence the amount of work which it is possible to do, tend to cancel out over a period of a week as they do not over a shorter working period.¹

It may be objected at this point that if a piece work system is adopted, there need be no bother about agreeing on amounts of work; that settles itself automatically for each worker.

This is partly true. And piece work may be a satisfactory method *if* there has been study and joint agreement upon a maximum week's output above which it will not be safe to go from a health point of view; upon a minimum output below which it does not pay either party to keep the worker at the machine; and upon joint control of piece rates. In other words, even the use of a piece work system does not lessen the importance of job analysis for the protection of all parties.

There is no single answer, therefore, to the question of right time units for the measurement of a job, and the setting of agreed amounts of output. But we are in this discussion assuming that the amount is to be determined in terms of a week's work.

2. It is further necessary to decide how many degrees or grades of competence at a job will be recognized, as offering a basis for differences in pay for the week's work.

Up to the present, organized labor in trades where piece work is not customary, has tended to oppose systems of differential pay. It may be that even with a plan like that here under consideration, they will still prefer for some time to come to recognize only two grades of competence—that of journeyman and apprentice. If such be the case, the decision jointly agreed to in the job analysis committee becomes the basis for bargaining about the pay to be given for these two grades. And it is undoubtedly true that there are many jobs where for one reason or another, it would be quite impractical to attempt to measure and evaluate differences in competence, which are to be reflected in differences in pay. But the unions' reason for insisting that there shall be no differentiation in the pay of workers of different

¹ Even this statement, however, is subject to the important reservation that careful studies show at some jobs as much as 15 per cent. variation in the amount of work which it is possible to do in summer and winter. See HUNTINGTON, E. *Civilization and Climate*, Chapters IV and VI.

degrees of competence (in cases where such differences might profitably to all be recognized) *disappears as soon as the whole arrangement becomes a matter of joint agreement*. For if the least competent worker whom it is jointly agreed the shop can fairly be asked to retain, is to get (as he would under a scheme of representative control) an adequate, "comfort-minimum" wage, there is no reason why all whose work is better than this minimum group should not earn more.¹ Where a condition of approximately equal bargaining power is developed, as was true, for example, during the war under the awards of the Shipbuilding Labor Adjustment Board, we see less reluctance on the part of the unions to recognize and allow differences in reward for differences in competence at a job. The differentiation in these awards recognized in some cases the following grades: first-class journeyman, second-class journeyman, helper, apprentice.

For purposes of illustration let us assume, therefore, that both sides have agreed to recognize *four* different grades of competence—which would, of course, be reflected in four different amounts of weekly output for workers of different degrees of ability at the same job.

3. It is then necessary to decide (a) how the whole group of workers shall be divided; (b) whether the grouping shall start from the best workers and scale down, or start with a medium group and work both ways to get the better and the poorer groups; and (c) whether the differences in the output from one grade to another shall be a constant factor.

Without attempting here anything like proof, we offer it as our experience that the least arbitrary grouping is that which begins with the best workers. Study of the production records of the best workers plus corroborative time study will afford a fairly accurate knowledge of a fair output for this group, because theirs will be the most fixed and unchanging unit of accomplishment. An attempt to work from some "average" or minimum group to determine output is more arbitrary; it requires far more time studies to get a basis of judgment; it involves elements which are much more variable.

In determining, then, what amounts of work Grade A (the best group of workers) are to do in a week, the committee would

¹ Indeed, the unions contend with some force that there is now in many cases no reason why the employer who wants to pay more than the union scale to his better workers cannot do so.

work from actual past records and time studies. These time studies, in their turn, should be open to joint scrutiny to assure that (a) all fair allowances have been made for breakdowns, use of toilets, going for drinking water, etc., etc.; (b) all "freak" times have been eliminated, *i.e.*, times too high or too low; (c) the studies have been taken at typical machines; and (d) the worker has worked at a customary rate of speed and with the customary technique. Mr. Taylor himself has well stated the objective to be held in view in carrying on time study:

"It must be distinctly understood that, in referring to the possibilities of a first-class man, the writer does not mean what he can do when on a spurt, or when he is overtaxing himself, *but what a good man can keep up for a long term of years without injury to his health, and become happier and thrive under.*"¹

4. It is next necessary to reach an agreement as to the elements to be included in a "fair week's work" for each grade. Is it to be construed only in terms of quantity of output?

The answer here will depend upon the characteristics of the job; but generally there are other factors than (a) *quantity* to consider. There are also, as mentioned above:

(b) *Quality*.—What is to be considered standard quality? How many seconds, rejects, spoiled pieces, etc., are to be allowed at a job in a week? There should be a definite understanding on these matters.

(c) *Costs*.—If there is a standard per cent. of waste allowed, amount of power to be consumed, amount of materials to be consumed, etc., it may be possible to embody these elements into the measurement of a fair week's work.

(d) *Attendance*.—Where the organization must be able to count upon the completion of a certain amount of work per day to keep a balanced schedule in the flow of work between departments, it will be important that an agreed proportion of each worker's weekly output be done each day. Otherwise the whole scheduling process might become sadly demoralized. The suggestion is that it will be fair to all to agree that no less than 10% nor over 25% of the individual's week's work be done in anyone day. This might mean also that *one* day's absence would be allowed without any loss of pay, provided the week's work is done on time, and the work of the days before and after

¹Quoted by E. D. JONES. *The Administration of Industrial Enterprises*, p. 219.

the absence are planned accordingly. More than one day's absence in the week would then definitely involve a failure for that week to qualify in the present grade. The worker would not, because of absence, "make his grade." Similarly he might not because of poor quality or excessive waste "make his grade," even though the *amount* of output might be up to the agreed figure. This type of control over absence seems to us the most conducive to self-respect and the most reasonable that is available.

Grade A would thus stand not simply for X units of output per week; but for those units in terms of an accepted quality plus a degree of economical operation plus a stipulated regularity in attendance. And the records would have to be devised to show these facts in proper correlation.

It is understood, of course, that all the other relevant data included in the analysis should be brought to bear to qualify the final conclusions about the content of a grade. Questions of fatigue, special strain, occupational disease, adverse working conditions, rhythm of work, length of the working life, etc., etc., should all play a part in the joint effort to reach the final decision.

Grades B, C, and D—the other three less efficient grades—have then to be agreed upon in the same terms. One item upon which agreement is necessary in this connection is the amount of the differential in the quantity of work from grade to grade. We shall let this differential be represented by P. Whether or not it would then be fair to say, for example, that

$$\text{Grade B} = A - P$$

$$\text{Grade C} = A - 2P$$

$$\text{Grade D} = A - 3P$$

will depend upon the groupings into which, as a result of study of the past production records and time studies which are available, the workers below grade A tend to fall. The reckoning is simpler if, as indicated above, P is a constant; but since these gradations are a matter for joint agreement, the variable would not need to be a constant.

Each week, assuming for the moment that the analysis has been "adopted," each worker would by his own showing in the correlation of the agreed factors do one of three things. He would either (1) make his grade, (2) fall below his grade, or (3) so far excel his grade as to approximate the next higher grade.

Now, whether or not wage amounts of the individual are to be changed each week in correspondence to his week's grade is a matter for further joint decision. It is not a point of great importance; but it seems to us that it will be fairer all around and there will be more constant and normal stimulus to improvement, if the grade is *not* considered as altered because of *one* week's deviation from grade. Our suggestion is that the grading is more flexible if some such arrangement as the following is adopted:

A worker who is in Grade A because of his record when the job analysis is adopted will remain there, as long as his record for 10 out of any 12 successive weeks is up to grade; if it falls below that he should at the expiration of the twelfth week go automatically into Grade B. But he returns to Grade A whenever in 5 out of any 6 successive weeks, he makes the record required in Grade A. (The number of weeks used throughout is only illustrative, since this is properly a matter for agreement).

A worker initially in Grade B will remain there as long as his record for 10 out of any 12 successive weeks is up to grade. He will advance to Grade A whenever his record is up to Grade A for any 5 out of 6 successive weeks. On the other hand, he will fall back to Grade C, if his record shows only 9 weeks out of 12 in which he makes his B grade. But he returns to Grade B as soon as in 5 out of 6 weeks he makes the Grade B record.

And similarly with the two lower grades. It is understood that the worker who cannot make Grade D in 5 out of 6 weeks is not sufficiently proficient to be retained. The aim is, in short, to secure a method which will define work, offer stimulus to improvement in grade, and provide a simple, understandable and more or less self-determining gauge of relative ability and effort.

But we are, we must definitely urge, *less concerned to secure agreement to all the above details* (which are really only illustrative and applicable to a limited number of repetitive jobs) *than to make clear the wide application of the principles involved.*

Principles Governing Use of Job Analysis.—These principles may now be recapitulated as follows:

The demand of managers and ambitious workers for recognition of differences in competence at a job in terms of output, quality and low unit costs is a widespread and probably fundamentally sound demand.

To give practical effect to this demand, job analysis as here defined is necessary.

But job analysis will be accepted and its results used by the

workers only as they are parties to its adoption—and to the adoption of the rates of pay for the specified jobs.¹

Workers' participation in adopting the analysis will be most conveniently, effectively and democratically undertaken through the agency of a representative Job Analysis Committee.

The findings of this committee should include some more or less specific definition of the grades of competence agreed upon as fair at each job.

The findings, after acceptance by the workers at the job in question, should then be turned over to a Committee on Wage Rates, as a basis for more enlightened action on payment.

Definition of Fair Day's Work.—From the foregoing discussion we draw the conclusion that *a fair day's work is that amount of work in terms of quantity, quality, etc., etc., which all parties agree, under the existing circumstances and with the available facts, to be satisfactory because reasonable, possible and expedient.*

The foregoing conception of job analysis and its use has a grip upon reality and an inclusive scope from which it is hard to escape when once it is understood. The factory which wants to work with the real stuff of human and democratic industrial method and organization will work at job analysis as a joint undertaking; for here it is face to face with the most living issues and problems which the life of the factory presents. Here we are tackling in first-hand encounter the elusive questions of interest in work and shop productivity. We are at one of the two points where the workers feel that divergences of interest in the operation of the factory may occur; hence, we are at a place where the value of shop representation is superlative. Upon *work* and upon *pay*, differences of vital consequence may arise between management and men; and the measure of the sound business acumen of both parties will therefore lie in their ability to see that these two are the points at which mutual interchange should take place on as an informed a basis as possible.

Job Analysis in the Civil Service.—In conclusion, reference should be made to the problem of job analysis in the public service. The fundamental principles underlying a study of civil service positions differ in no important particular from those applicable in industry. But the nature of the problem is modified by the fact that so often the important element, from the view

¹ See Chapter XXIII which takes up the discussion of a payment method at this point.

of economy and efficiency as well as fair public administration, is a *comparative* study of different jobs bearing the same or similar titles. The effort has to be, first, to classify *titles* so that they always connote approximately the same duties; second, to compare the job-content at work in different branches of the public service bearing the same title; and third, to standardize salaries in relation to titles and duties.

This work of comparison is by no means absent in industry. Large corporations with a number of plants are not long in seeing the necessity for a certain amount of such standardizing of titles, work and pay, for similar jobs in different plants. But no attempts to make these uniform can be satisfactory without an adequate basis of separate job analysis in each plant, as well as in each government department.

This being so, the preparation and acceptance of these analyses, *in public or private business*, is, for reasons which we have already elaborated, necessarily a *joint* labor of experts, administrators and workers. The public service promises, indeed, to be one of the most fruitful fields for the application of the principles laid down in this chapter; since there the problem of securing initiative, efficiency and interest in work is peculiarly to the fore. And job analysis, conceived and executed in the representative manner here suggested, deals a death blow at the very vitals of bureaucracy. For it recovers to the individual worker a voice in the determination of the terms, methods and conditions of his work; it ministers to his self-respect; and it minimizes the chance for the petty tyranny of small-minded executives.

The incalculable benefit of arousing an active sense of partnership in the enterprise is especially to be prized in government service, since the tendency is to a dangerous degree toward a passive acceptance of the governmental agency as a dispenser of sinecures. It is because job analysis assumes change, the need of change and the possibility of infinite improvement that its influence in bureaucratic organizations can be of priceless value. But that value is to be derived only upon one condition; that the whole undertaking becomes the subject for thoroughly representative determination and application. In this way it is not only brought into harmony with principles upon which the government of a democratic people presumably rests; it is brought into harmony with principles of human nature from which there is no escape.

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CHAPTER XX

THE MEASUREMENT OF LABOR TURNOVER

Labor turnover is the shifting which takes place in an organization's working force. It is the "change in the force due to men leaving Every worker who leaves the employ of a given establishment for whatever reason constitutes a part in the turnover of that establishment. The study of labor turnover embraces the study of the causes and effects of every termination of employment and the means of preventing such terminations as are socially undesirable."¹

Labor turnover is measured in terms of the ratio of those who leave their employment in a given period—usually assumed to be a year unless otherwise stated—to the average number who have been on the active pay roll during the same period.

The per cent. of labor turnover, in other words, is obtained by dividing the number of those leaving by the number in the total working force.

Having given these definitions categorically, we hasten to add that there is by no means complete agreement in the employment managers' world as to what turnover is and how it should be measured. There is a second method of considering it which centers around the idea of *replacement*; and considers that turnover has only occurred when the cycle has been completed from the hiring of a worker to the hiring of his successor when he leaves. The proposal of those who advocate this method is: "To compute the percentage of labor turnover for any period, find the total replacements for the period considered and divide by the average number on the payroll."²

There is undoubtedly much to be said for this method of computing labor turnover, since it indicates the success with which the needed working force is being maintained and the needed amount of production being turned out. It assumes, however,

¹ SLICHTER, S. H. *The Turnover of Factory Labor*, p. 1.

² DOUGLAS, P. H. *Methods of Computing Labor Turnover*. *Bulletin*, The Taylor Society, v. 4, No. 4, p. 20.

the prior standardization of a plant's production in terms of each individual's day's work and of a standard total day's output of the plant—a group of facts which are infrequently met because the necessary degree of control over the volume of production can only begin to be obtained by scientifically managed plants. For only as this standard performance is known is there a basis of comparison between expected and actual production.

For the more rough and ready purposes for which factory statistics are in the immediate future likely to be used, it seems to us, therefore, that the use of separations as the basis of turnover reckoning is the more valuable. For separations have the added advantage of fastening the attention on the *individual worker who leaves*; and he, from the point of view of diagnosing a factory's labor troubles, is the one in whom interest centers.

In short, labor turnover is not a thing by itself, an isolated phenomenon to be measured and discussed only in relation to a standard output. To be sure, it has a very close relation to the question of output. But labor turnover, properly conceived, is rather a symptom than a disease. And like all symptoms it is of interest to the practical person only in so far as it points to the nature or causes of the maladjustment, and thus leads to constructive or preventive measures.

People usually quit the employ of a company because of some dissatisfaction. And the effort from the administrative point of view must be to discover the source of that dissatisfaction. If a company's figures of turnover are in terms of separations they are, therefore, in terms of dissatisfactions, provided, of course, proper allowance has been made in the computation for other, non-personal causes.

If all the workers in a department or in a whole plant go out at once, the event is spoken of as a strike; and the board of directors at once inquires of the manager as to the reason for it and the nature of the men's demands. Indeed, the management may be severely censured for letting an interruption of work occur. But boards of directors and managers do not always so readily see that labor turnover—or the largest single part of it—is simply a strike by erosion, about which they should be profoundly exercised. It is a gradual wearing away of the working force one at a time, due to some cause and some demand which is unvoiced in any formal way because no channel of communication or adjustment is provided. And it is as important to find out and

meet this demand, when it is a just one, as it is in the case of an actual strike.

The Formulæ of Labor Turnover.—Reduced to its simplest terms, the formula for the determination of labor turnover would be:

$$T \text{ (turnover)} = \frac{S \text{ (Total separations)}}{F \text{ (Total average force on pay roll)}}$$

As it stands, however, this formula is too simple to disclose very much about the meaning of the figures of separation. Some modifications in the method of computation are essential. Hence we urge that the figures of leaving be itemized in ways that give them significance. An initial division may usefully be made between avoidable causes, unavoidable causes and lay-offs due to permanent curtailment in working force (as, for example, the laying-off of a staff of millwrights who have been employed for a number of months to set up new machinery).

Any wide agreement as to which causes for leaving are avoidable or unavoidable will undoubtedly be difficult to secure. But wide agreement is not so much needed at first as agreement of all concerned *in one plant* to keep its own figures consistently on the same basis over a period of years so that they are valid for comparative purposes. For after all, their major purpose is to reflect from time to time the success of the management in reducing avoidable causes of dissatisfaction.

Tentatively, therefore, we suggest that typical unavoidable causes of leaving may be: Death, marriage, "moved away," sickness, better position. We appreciate, however, that in any given case any one of these causes may have been avoidable.

Causes of leaving which are usually avoidable are: Accidents, disagreeable work, low wages, laziness, poor adaptation and occupational sickness.

Discharge, depending on the particular circumstances, may be either avoidable or unavoidable—although it is frequently avoidable. It should, however, in addition to appearing as avoidable or unavoidable be separately listed in any case.

Lay-offs due to seasonal fluctuations are to be considered from *the point of view of measuring dissatisfaction*, as avoidable causes. Lay-offs for permanent curtailment are unavoidable.

With these explanations we suggest the following modification of the previous formula, as giving a figure which really reflects

in some approximate way the relative success of the management in keeping the sources of complaint and dissatisfaction at a minimum.

$$T = \frac{(S - U) - LC}{F}$$

In this equation, T equals per cent. of turnover; S equals total separations; U equals unavoidable separations; LC equals lay-offs due to permanent curtailments in working force (but *not* seasonal lay-offs); and F equals the average force on the payroll. The figure F may be arrived at in several ways; but perhaps as simple a method as any is to use the total weekly payroll figure of the departments in question. And if the average force for a year is sought, these fifty-two amounts could be added and divided by fifty-two to give a yearly average.

If the figures represented by S, U, LC, and F are obtained in terms of a week, in order to get the standard labor turnover figure, T should be multiplied by 52; although the resulting figure will only mean that the turnover for that week was *at the rate of* such and such a per cent. per year.

When, however, fifty-two consecutive actual weekly per cents. are available, the *total* of those fifty-two will give the actual yearly avoidable turnover.

Endless refinements in the turnover figures can, of course, be made. Indeed, the literature on this subject is already voluminous and concerned with a great variety of refinements in methods of calculation. For example, complications due to the permanent reduction or the permanent increase of the working force during the period in which the amount of turnover is sought have occasionally to be met. But in the interest of emphasizing the main idea of analyzing the remediable causes of dissatisfaction, we shall suggest no further modifications in formulæ.

Figures showing the total factory turnover do not, however, necessarily indicate a great deal. The more itemized and localized they can be, the more significant they tend to become. For example, turnover when kept by departments often shows one or two departments to be the principal causes of high turnover; and when kept by rooms or machines it may even indicate that it is one particular operation or one foreman who is causing much of the trouble. Similarly the segregation of turnover by sex, by

age, by wage groups, may reveal discrepancies in company procedure that will otherwise remain unsuspected.

Labor turnover figures should be compiled, in short, not to cover blank forms with figures, but in order to show where disaffection exists in the plant, why it exists and how much of it can be eliminated.

There is considerable value, also, in one other set of figures which shows the length of employment of leavers. If, as is often the case, the most turnover comes within the first six months of employment, it is likely to argue some deficiency in methods of selection or training. If it comes with workers of long standing, that may indicate little opportunity for advancement in wages or in kind of work. When carefully scrutinized, facts about length of employment of leavers are likely to be illuminating.

Discovering Causes of Turnover.—All this discussion assumes that the company has accurately discovered the cause of each individual's leaving. In the absence of a centralized employment office through which all leavers are required to report, the chances that the true cause will be revealed are exceedingly small. Workers usually will not or do not tell foremen or timekeepers the real reasons for their departure. It may, indeed, be hard enough for the interviewer to get a candid answer to his queries. But the chances of accurate analysis are greatly enhanced if some tactful person in the employment manager's office is required to spend several minutes in considering with the leaver in private interview the reasons for his going.

The danger here is that the interviewer will put into the leaver's mouth some reasons which the worker will immediately take up and repeat back without ever disclosing what is really on his mind. The only way to prevent this is for the employment manager to be impressed with the fact that the leavers are *par excellence* the ones who feel most strongly about the shortcomings of some aspect of the plant's labor policy; and that it is of first importance that their uncolored testimony be secured.

The Cost of Labor Turnover.—Although labor turnover is not a fact to be dealt with independently, its costs can to an approximate degree be figured separately. And a compilation of the turnover costs for a given job, department or plant may be exceedingly useful, as providing a cogent argument for changes and improvements. Admittedly such costs cannot be arrived at with perfect accuracy. But enough of the items can be

segregated or closely estimated to present a conservative statement of the losses in production and in indirect expenses due to high turnover.

Mr. Richard B. Gregg has presented a list of items of cost which is illustrative if not exhaustive. It may, therefore, be of suggestive value at this point as showing the charges involved in labor turnover, which are not ordinarily taken into account.

"These costs may be roughly divided into overhead costs and operating costs.

"Among the overhead costs there are:

1. More rapid depreciation of machinery because of ignorance or lack of skill of new workers.
2. Extra floor space and extra machines to provide against idleness of a certain amount of machinery due to shifting labor.

"Operating costs may include any or all of the following:

1. Time of increased superintendence or office work, including:
 - (a) Time spent by foremen or superintendent in discharging a worker where that is the way the vacancy occurred.
 - (b) Time spent by foreman or other workers in training the new employee.
 - (c) Time spent by clerks on additional payroll or other records.
2. Machine costs, covering:
 - (a) Time machinery is idle when a new worker cannot be obtained immediately.
 - (b) Idle machinery for temporary stoppages due to ignorance or lack of skill of new worker.
 - (c) Repairs to machines or renewals of tools broken for the same reason.
3. Material costs, including:
 - (a) Waste or damaged material due to ignorance or lack of skill of new worker.
 - (b) Difficulties in subsequent processes due to poor work by new employees in previous processes.
 - (c) Lower production while new employee is working up to his best skill.
4. Additional accident cost due to higher rate of accidents among new employees."¹

Cautions.—Figures of labor turnover and of its costs are not, however, to be taken wholly at their face value. Conclusions from them should always be drawn with some caution, until methods of compiling them and the reasons for compiling them are known. As a general index, as a barometer of the trend and current of the factory's labor atmosphere, labor turnover figures,

¹ GREGG, RICHARD B. Labor Turnover Records on the Labor Problem. *Proceedings*, American Society of Mechanical Engineers, Dec. 4, 1917.

if carefully prepared, are exceedingly useful. But it must be remembered that to put qualitative facts—facts about people's attitudes and desires—into quantitative measures is a process in which results have to be viewed with caution.

A situation which is sometimes met and which the figures if superficially viewed do not reveal, is a rapid turnover among fifteen or twenty-five per cent. of the force while the other workers remain employed fairly constantly. Where this is found to be the case, the causes of leaving are likely to be different—and perhaps less serious—than where the turnover is more generally distributed.

Moreover, account must be taken of the fact that some turnover may be a natural measure of self-defence against the monotony of certain kinds of factory work. A degree of shifting from one plant to another may under present conditions be a healthy and socially desirable protest against present methods of utilizing machines. At any given moment in one plant, it *may* be impossible to do much to compensate for the sameness and dullness of the work. And in such a plant to attribute inefficiency to the employment office because of a high labor turnover is unfair; it is a use of figures without a sufficiently careful examination of their meaning.

There is, indeed, a real danger that managers who have installed separate employment departments will take it as axiomatic that the amount of turnover is a direct index of the personnel department's efficiency. It may be—and it may not; but until the figures are carefully analyzed and compared with those of previous years and of other plants similarly situated it is unscientific to draw this conclusion.

Remedies for Labor Turnover.—If turnover is a symptom of some underlying maladjustment, the cure for the maladjustment will remove the symptom. And since we are considering throughout this book the ways of securing a scientific and human working adjustment between management and men, we are at every point discussing remedies for the avoidable labor turnover. There will, therefore, be no point in enumerating those remedies here. One outstanding remedy of recent years does, however, deserve separate mention.

It is true, except where abnormal war conditions have completely disrupted local labor conditions, that the introduction of functionalized employment offices in charge of trained execu-

tives of a superior type *has of itself tended to effect an immediate and marked reduction in the amount of labor turnover.* The fact that one office was specializing in selection and in the subsequent adjustments has almost without exception brought labor turnover within a twelve months' period from an abnormal and excessive figure to one more reasonable and normal. The evidence obtained from the figures of plant after plant is practically conclusive on this point.

Labor Loss.—Mention should, finally, be made of a somewhat more elaborate method of computing all the labor losses in terms of productive hours which the plant suffers each day or week. "Labor loss," says Mr. D. L. Hoopingarner in a suggestive pamphlet,¹ "is the loss of productivity and the costs due to loss in applying man power." Like all writers who use the replacement theory he assumes a "standard work force," and a standard flow of production. And he bases his figures of labor loss on deviations from this standard caused by failure to replace needed workers who have left, by the lessened output of new workers, by absence and tardiness.

The formulæ and charts suggested by him are of distinct value, and can help in an effective way to show the relation of regularity in attendance and of the efforts of the working force, to output,—a correlation which in some way or other it is essential to make. The only criticism, it seems to us, which can be offered, is not of his methods, but of the great majority of plants which could not use his methods because they have not yet determined what for them is a standard work force or a standard day's work per unit of man power. The method requires, in other words, not merely good cost accounting methods but good planning, routing and scheduling procedure.

That some accurate record is needed of the loss which production suffers because of the absence of needed or expected workers is obvious. And to the extent that any corporation has the data so that it can make use of Mr. Hoopingarner's charts, it will have a graphic and accurate way of measuring the loss caused by this irregular application of labor.

Conclusion.—Discussion of labor turnover loomed large in the earlier literature of employment management. It seems by common consent to occupy a less important place today. Not

¹ Handbook on Employment Management in the Shipyards, Special Bulletin on Labor Loss.

because the fact of turnover is any the less real or less important as a source of inefficiency and reduced morale than it was five years ago. But managers are coming to see turnover for what it really is,—a rough gauge upon the success of the factory's labor policy. As such an approximate measure it is useful; and the more refined and accurate its measurement can be, the better. But the real interest of forward looking managers today is in those elements of positive personnel procedure and in those methods of enlisting interest and cooperation in effective workmanship, which assure that gradually but inevitably the avoidable and socially undesirable turnover will decrease.

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CHAPTER XXI

METHODS OF FACTORY LABOR ANALYSIS

The labor audit offers a method for the diagnosis of an organization's labor relations. It can state and define the problems which do or may directly effect the labor relations of an organization. It can provide a method of investigation which will lay bare symptoms of unsound conditions. It is perhaps the nearest possible approach to an instrument of precision, a probe for industrial ills in a factory, store, railroad, mine or other industrial unit. And it provides a method for an orderly record of facts or of the progress of events. It requires, therefore, a tactful method of personal approach, a ready knowledge of the usual symptoms and ills, and an open but firm determination to see that the right advice is not merely given but acted upon. What, then, is a labor audit?

Definition.—*The labor audit is a reasonably exhaustive and systematic statement and analysis of the facts and forces in an industrial organization which affect the relations between employees and management, and between employees and their work; followed by recommendations as to ways of making the organization more socially and humanly productive and solvent.*

The phrase "labor audit" itself suggests the ends in view. We are familiar today with the sales audit and the financial audit. Their purpose is to render a report indicating the degree to which the organization's policy and practice in those fields are sound and solvent.

Again, managers are familiar today with various types of accurate current reports regarding different phases of factory activity. There are elaborate balance-of-stores records; elaborate production records, and analyses of selling conditions. But as yet most managements have not developed well organized methods for recording or understanding the elements which go to make up what is in many businesses one of the largest classes of expense—namely, the labor costs.

Purpose of a Labor Audit.—The purpose which a labor audit serves in an organization which has no modern employment

administration will differ from its purpose where many modern practices obtain. Where personnel work is as yet largely undeveloped the purpose may be to secure the facts to determine whether there is need of a more progressive policy. Where a progressive policy is already in operation the audit will serve to check up its effectiveness and to indicate needed changes and improvements.

Bearing in mind the difference in the problem in these two cases, it may be said in general that an audit can be made with useful, practical results in cases where low productivity is due to human rather than to mechanical causes. The audit may be used to inquire into the causes of strikes, or into reasons for the absence of morale in working groups, where discontent has not resulted in an interruption of work. It may be used to inquire into the causes of that elusive uneasiness usually spoken of as labor unrest. It may be used to ascertain the causes of labor turnover, or of some friction or specific maladjustments within the organization.

The objection has been urged that in any given situation the causes of difficulty may usually be found in one definite set of facts or records without going exhaustively into related problems. In any given case this may be true. But the purpose of the labor audit is to set forth items and causes *in an inclusive way and in their proper perspective*. Over-worked executives are peculiarly disposed to attribute labor difficulties to causes which are too simple. Hence, the labor audit attempts to show both the subtleties and the complexities of the causes underlying a plant's labor difficulties. It attempts to see the problem steady and see it whole.

It is valuable to have a method of checking up *all the possibly relevant items*, even though some of them may not be in active force in any given situation. The highest medical talent now insists upon a comprehensive examination of the patient to be certain that all the factors contributing to disease have been considered. The comprehensive labor audit performs an analogous service in the managerial field.

It has, also, become a psychological truism that we see only what we have been taught to see, or what we have been told to look for. For this reason, if for no other, an itemized check-list stimulates observational power. A schematic arrangement of topics of any sort makes it easier for the investigator to

remember what he is to look for and what he has seen. In other words, a memorized outline provides a convenient peg on which to hang facts, impressions, and ideas which are for subsequent record.

Moreover, the use of the same topical arrangement, which becomes reasonably standardized in one's mind and records, serves to make comparison of records and facts easier and more rapid. Several plants which made labor audits several years ago, go over the same ground at six months' intervals in order to get an idea of the progress that is being made.

The value of a standard procedure for comparative purposes is particularly great for a holding corporation or the central service organization of a large corporation with scattered plants. The problem of obtaining and comparing necessary information on labor matters in its various plants has become a grave one for the large corporation. The labor audit can help materially to overcome this difficulty.

Since the purpose of the audit is to discover all the existing facts independently of anyone's opinion as to whether they exist or not, the more objective these facts can be the less is the chance that personal prejudice and bias will figure in the report of conditions. The aim is to have evidence which is beyond dispute; and the more the evidence is of a character that any impartial person must accept, the stronger will be the case for adoption of the recommendations based upon it.

Yet there are two reasons why this point should not be pressed too far. In the first place one of the most important elements in every labor situation is what the people think—the people on both sides. We made an investigation in a concern where the workers believed that the percentage of cost of overhead and "paper work" in the planning and scheduling department was excessive. It happened in this case that the proportion of this expense was not comparatively excessive in the eyes of anyone familiar with the process of re-organizing methods of production control. It was the fact that the workers *thought* it was too expensive which had caused some difficulty.

In the second place, because of the nature of the facts covered by a labor audit, it will probably never be possible to submit all its items to accurate measurement and to statistical record. An intelligent use and interpretation of the statistical records can throw important light upon the personnel problem. But it would

involve an unwarranted over-simplification to believe that all the subtle influences at work in the labor situation can ever be recorded in graphs or figures. That, after all, is not what is needed or wanted. The demand is rather for a reasonably exhaustive audit check-list which keeps the investigator's eyes on specific problems, most of which are objective, or at least definite in content. The practical result will then be that the investigator's opinions and conclusions are kept in close relation to a defined group of facts.

A fundamental purpose of the labor audit is to provide the management with a form of provocative report on industrial relations. In many cases, even where there is resident management, an accumulation of all the facts about a plant's labor conditions will supply a wealth of unanswerable arguments in behalf of needed changes. Many managements and corporation heads, who do not often see the inside of the factory need a severe jolt; and the information which the audit affords can, if it is well set forth, administer this jolt without the rupture which leads to personal antagonisms and yet in a way that impels to remedial action.

Especially in corporations where a degree of complacency exists, either because profits have been large, competition restricted, or amicable joint relations uninterrupted, there is a tendency to let well-enough alone. It is in such plants as these that, from the point of view of modern scientific industrial and personnel organization and activity, there is usually most need for a thorough overhauling. Both production methods and ways of handling the labor problem are likely to be archaic and inefficient.

In this connection it is useful to distinguish between facts which show that an accepted policy is not being carried out, and facts which point to the need of a change in policy. In the former case the audit often works almost automatically to bring necessary corrections. It is not an uncommon experience for the investigator to go through a plant with a superintendent and, for example, ask such a question as, "How often are the windows washed?" or "Who is in charge of shop housekeeping?" and return to the plant in a few days and find that the windows have been washed or the shop cleaned up. So many plants are defective in their follow-up and inspection work regarding personnel activities that an audit is often justified simply by reason of the

deficiencies in the execution of policy which it reveals. There are cases, however, where the facts indicate the need of a different policy, and where it is necessary to do more than make a bare statement of fact. The experience of other plants should then be pointed to, and the effort made, both in the written audit and in conferences, to direct the argument in such a way that there is no escape from the conclusion that a change in policy is necessary.

We have made several audits in plants that were without personnel departments. In almost every case it was possible to convince those at the top that enough problems vital to sound management were being ignored, to make it a wise precaution for them to secure a special executive on labor relations. Indeed, when an audit puts on record at length, under numerous topics, the vital points at which the company's efficiency is obviously impaired if the management has no consecutive policies on personnel problems, it can become a powerful brief for the institution of an effective personnel department.

Prerequisites to Making a Labor Audit.—There are at least four essential prerequisites to the making of a labor audit. There must be:

(a) A readiness on the part of the management, and preferably of the workers also, to put all relevant facts and records at the disposal of the investigator.

(b) A properly qualified auditor or investigator.

(c) A method of conducting the audit and of reaching all the sources of information.

(d) A standard, exhaustive and logically ordered check-list of items. (See the next chapter.)

It is important to understand how indispensable these prerequisites are. Regarding the first there are usually two different possible situations. Either the management calls in an outside consultant to make the study, because it believes certain benefits can be derived; or someone in the management decides that a labor audit can be profitably made by the personnel manager.

In the first case, since the company is calling in the consultant, the presumption is that it will put at his disposal such information as will make it possible for him to draw his conclusions effectively and quickly. As a part of the education of the management, the consultant may indicate that he desires no

information which he cannot convince the company is relevant to its labor problem. But usually firms which are willing to have an audit made are found to be eager to proffer all the necessary information.

The situation is somewhat modified where the consultant is sent by the central management to one of its subsidiary plants. Unless the labor auditor's presence is explained with considerable care and tact, both by the head management and by himself, there is danger that a feeling of suspicion may arise in the minds of the local managers. They should not be allowed to feel that their work is in any way being pried into in an unfriendly spirit. The fact that the labor auditor is present in the role of counselor and helper should be stressed to the maximum.

Where one staff member of an organization desires to carry forward a careful study of labor conditions, the proposal may or may not meet with the approval of the management. If it does not, the management has in the long run to be "sold," just as it does in advance of any other innovation. An able personnel manager can, nevertheless, from his position in the organization make a labor audit in the course of his own work that will be surprisingly complete, even though he has not access to all the details of practice and policy in the other staff departments. As a matter of fact, however, an up-to-date management will show little reluctance to having the personnel department carry on careful labor studies. On the contrary, wise managers are making it a definite part of the personnel manager's duties to make such studies at periodic intervals.

Obviously this spirit of cooperation and helpfulness must extend throughout the management down to the lower executives. Much valuable information about the concrete application of the labor policy is in the minds and experience of the foremen, and unless they have been explicitly assured that they can safely be free with their information, this important source of experience and facts may remain virtually untapped.

Usually, however, lesser executives are glad enough to discuss their problems once they are assured a sympathetic audience. It is the experience of consultants in all branches of industrial work that many members of the executive organization of a plant are so situated that there is nothing which is so wholesome or so necessary for them as to pour out their troubles. The labor auditor can be of peculiarly great service to the organization

in being the discreet listener to the trials and tribulations of the members of the staff. His service as a confessor may be a by-product of the audit, but it is one of its most valuable by-products.

Thorough analysis of the industrial relations problem requires also a direct contact with workers as to their particular problems, points of view and difficulties. We have made factory studies under different conditions—in plants where the management felt that it was inadvisable to interview the workers directly; in plants where the management was indifferent as to whether the workers were consulted or not; and in plants where the workers were instrumental in having the study made and were deeply interested in seeing to it that all the facts were made available. It can be definitely said that the most satisfactory results are obtainable under the last of these three conditions.

It is worth while, however, to mention further the situation in which it is not deemed desirable by the management for the consultant to have direct contact with the workers. This limitation has not proved as serious as might be supposed. It is usual to find among the foremen and other executives one or more who through long acquaintance with the company can tell a graphic story of its successes and shortcomings on the labor side. In almost any corporation if one were simply engaged to make an audit of the executive organization including foremen, one could lay bare many of the difficulties which are hampering right personnel relations. But to limit the study in this way, is to lose one of the conspicuous educational values of the audit.

Among the employees there is always information and a point of view toward matters under examination, which is illuminating and suggestive of needed changes. Since they are the ones chiefly affected by the employer's policies, workers are, looking at it from any point of view, preeminently those who should be questioned and consulted. The objection made by employers who do not want their workers interviewed is that it will stir up trouble. It may safely be said that this fear is ungrounded if the auditor is a person with reasonable tact, and if the existing conditions are not already so aggravated that open trouble is inevitable.

Manifestly, the most satisfactory results are to be had where the workers are a party to the audit. One of the most informing

and practically useful studies which we ever made was in an organized plant where representatives of the trade unions were instrumental in having the study made because of the dissatisfaction of their members with the conditions of employment. The auditor met with a representative committee from the whole plant on the first evening and got a general sense of the difficulties. Each subsequent evening was spent in conferring with a delegation from each department and the days between were spent in the respective departments, checking up with the foremen and other executives, the testimony obtained on the previous evening. At the end of the study, the auditor presented his general conclusions to the whole group verbally and talked them over informally with the management. He then wrote the final report, which was instrumental in ironing out all of the acute troubles.

As a practical matter, in any plant which has any appreciable degree of employee organization, but where an audit is being undertaken on behalf of the management, it is most advisable that the auditor be allowed to indicate at the outset to the employees' group the purpose and method of his inquiry. In this way he can at once set at rest any question about his constant presence in the plant, or suspicion as to his reason for being there. The positive service which any employees' organization can be to him in supplying information will be indicated more specifically in connection with the discussion of methods of conducting the audit.

Useful as the labor audit check-list is as an instrument of diagnosis, it achieves maximum usefulness only in the hands of a qualified auditor. It may be conservatively stated that *the labor audit will be no better than the auditor*. Everything will depend upon his qualifications. First in importance should be placed his ability to elicit and respect the confidences of the people with whom he confers. In other words, he must be a person of a reasonably agreeable personality; he should be patient, accurate, dispassionate, sympathetic, tactful. He should be discriminating and temperate in revealing what he knows; he should be preeminently gifted with a teaching sense that will enable him to draw people out and inculcate his own ideas only so fast as the individuals and the organization can absorb them. And in addition to these more personal qualities, certain definitely intellectual qualifications are necessary.

It seems reasonable to assume that when a concern makes an

initial labor audit, or keeps a perpetual labor audit, it does so because of an appreciation of the importance of right industrial relations. It does so because it recognizes the need of correction or improvement. But correction and improvement can only take place if a concrete comparison is constantly being made between what is and what ought to be. In other words, the labor audit will only serve its purpose if it is in the hands of an auditor who comes to his work in a liberal, progressive and well-informed spirit. An effective labor audit cannot be made by a person of reactionary temperament and ideas. This is truer at the present moment than ever before in the history of the industrial world. For the auditor has to see each organization's problem, not as an isolated phenomenon, but as part of a world movement of liberalizing and humanizing influences. He must, in short, have a reasonably clear conception of how the industrial relations of the plant could be run with greater and greater success and felicity, if only his recommendations were allowed gradually to have effect. If the audit is to exercise a constructive influence—and this is its only excuse for being—it must be made by a person who is a practical idealist, who keeps himself informed upon all developments and experiments in the field of industrial relations the world over, and who is able by the weight of facts to win others to his way of thinking.

Methods of Conducting the Labor Audit.—The following statement of the methods to be employed in conducting the labor audit is made from the point of view of the outside consultant. Some problems of contact which are serious for him will undoubtedly disappear when the study is made by those within the plant. Yet, it will probably be true that up to a certain point the personnel manager can profitably follow much the same procedure as the one here indicated.

A preliminary word of warning is necessary, however, since it is literally true in our own experience that in no two organizations has the analysis been pursued in identical ways. The approach to each new plant is a journey of discovery on an uncharted sea and the auditor must be prepared to watch for every clue and be exceedingly flexible in his methods. It will be valuable, however, for him to have two or three general points in mind.

He should, for example, be sure to talk with those executives who "have ideas" on the labor problem of the factory. These

individuals may not be found administering the personnel relations but they are to be found in some capacity in almost every plant. In the second place, the auditor will take pains to plan his campaign of interrogation and conference in such a way as to get the maximum educational results. His temptation will be to adopt the attitude that he is there simply to get the facts. Indeed, this is perhaps the subtlest danger to which the auditor may become a victim. It will be the line of least resistance for him simply to draw out information as quickly as possible, draw conclusions in his own mind, write as effective a report as possible, setting forth the facts and his recommendations, and consider that his work is then ended. The trouble with this method is that it is likely to lead to the futile consequence that his report is simply read and filed away without action being taken, or without enough action being taken to constitute a real change in policy. Emphatically the process of making an audit is *not* simply the writing of a report. *It is a process of constant education through personal contact, conference, discussion, question and answer.* Half the educational value is on this personal side; and to ignore it is to miss the real opportunity for most rapid advance.

In short the auditor must sell his ideas as he goes along, both by the way in which he asks his questions and by the way in which their assent to the facts brings the executives naturally to an acceptance of the auditor's conclusions.

The first interview will naturally be with the highest executive, with whom the auditor takes up especially problems of the determination of personnel policy and the nature of the policy under which the company at present operates. It will be important to get from him as clear a picture as possible of the division of responsibility and of authority in the organization. In this connection it will be helpful to secure or to have made, an organization chart of the executive organization as a whole. It cannot be too greatly stressed that at the bottom of many personnel problems is the fact that responsibility is vaguely assigned, and that authority is not clearly designated on important matters of administration. Indeed, the auditor's efforts in the direction of clarifying function are not simply indispensable to him; they are invaluable to the company.

The labor auditor will indicate his method of procedure to the chief executive and will ask to be introduced to the lesser executives with whom he can talk to advantage; he will also see that

the top executive instructs the other officials to put necessary data and records at his disposal. Whether or not all such tabulated matter should be studied next by the auditor, he will have to decide on the merits of the individual case. Usually, however, he will carry on his interviews and factory observations with greater point if he has that grasp of the outstanding problems which a preliminary study of the records may reveal.

Available Records.—Turning, therefore, to a consideration of the records and printed material on personnel matters, which the auditor should examine, we find the following data to be of service:

- (a) The number, causes and cost of accidents.
- (b) The amounts, causes and cost of sickness.
- (c) The amounts, causes and cost of occupational disease.
- (d) Figures showing the relation between wages and output; between hours and output; between labor turnover and output.

This correlation of data is highly significant. It may not always be possible to secure it; but there is unquestionably one of the most fertile fields for statistical refinement in this problem of correlating the figures on the production and the human side of the business.

- (e) Length of employment of workers.

It is important to know what percentage of workers have been at work for a given length of time.

- (f) Wage groupings by (1) amounts both in terms of weekly and yearly incomes; (2) sex; (3) age; (4) length of service; (5) degree of skill.

This arrangement of wage statistics will almost invariably throw light upon the efficiency of the factory's payment methods and upon any serious discrepancies and shortcomings in amounts of pay. Factories do not usually compile their figures in this way, but if when the labor auditor commences his work he can call for a certain amount of clerical assistance in the factory, a good deal of this data can be collected during his visit—usually enough to make it possible for him to have a fact basis for his discussion.

- (g) Records of labor turnover.

These records to be significant should be itemized in various ways but especially by departments, sex, length of service, amounts of pay, etc.

The adequate compilation of records is one of the immediate ends for which the consultant will have to strive with some pains. Many plants do not keep records of the above character with any permanency and have no idea what the situation is regarding these personnel facts. It is not until the significance of more adequate control over these important items is understood that a proper interest in this type of statistical work arises. But nothing will be clearer to the executive who

has seen the beneficial results of a more careful control of production costs, than that a certain minimum of personnel record figures will be immensely valuable.

In addition to the existing statistical data there will, of course, be a certain amount of *documentary material* which the auditor will examine with profit before he goes into the plant. He will familiarize himself, for example, with profit sharing arrangements, constitutions of mutual benefit societies and employees' representation schemes, minutes of meetings of foremen's clubs and employees' organizations, the files of the company paper or house organ, and similar sources of information about the different activities of the plant.

Interviews with Executives.—The wise auditor will usually conduct his personal interviews with the executives from the top down in the order of the authority of the lesser executives. In these interviews he will in many cases repeat the same questions—questions having to do with the responsibility and authority of the individual, those aiming to make clear his conception of the labor policy under which the company operates, those aiming to secure his evaluation of the success of that policy. The auditor will save himself considerable misunderstanding and will avoid confusion if he says specifically to executives who are outside the field of immediate personnel administration, that he is not talking to them as an expert in their field, but *that he is speaking to them only in his capacity as a labor expert anxious to understand how their problems affect the labor problem.*

In the course of such interviews he will necessarily have to go through a good deal of chaff to get the wheat, since every specialist is proud and eager to describe the technical work in which he excels; and it is only with difficulty, and often incidentally, that he will let fall any information which throws light on the labor aspects of his technical problem. For this reason the method of direct questioning must occasionally give way to patient waiting for an executive to tell his own story in his own way.

With the general knowledge of plant organization, policy and practice, which the interviews with executives should afford, the auditor will then confer individually with each of the foremen. In this way he will get a valuable corroboration or denial of the statements which the higher executives have made. He is frequently astonished to see the wide discrepancies between the

stories which the higher and lower executives tell, as to the definition of responsibility and the character of the policy under which the plant is operating. The labor auditor has a major task in helping to clarify this situation and remove misunderstandings.

But in the interviews with the foremen he will concern himself even more with the detail of the individual foreman's methods of running his department, especially on its labor side. It is one of the substantial by-products of the auditor's work that he comes to have a fairly good knowledge of the competence of the various executives for the jobs they have in hand. At the least, the auditor will know which executives are most successful in carrying on their work as it affects the labor problem. Finally, the value of these interviews in giving the executive a chance to state his troubles can hardly be over-emphasized. The need for a confessional in industry is every bit as great as certain religious bodies have found it to be in private life.

Attendance at Meetings.—The auditor will also get much light upon the practical working of the company's human relations work if he attends every executives' or workers' conference or committee meeting which takes place during his stay in the plant. Not infrequently an operating committee of the executive staff has daily conferences on the plant's problems. Attendance at a number of these meetings usually brings out suggestive information, even though many of the problems treated have no direct bearing upon the labor question. The same will be true of foreman's meetings, councils and conferences, whether they are brought together for business or for social purposes. If there are meetings of employees' organizations of any sort, which the auditor can attend without being too conspicuously out of place, it will be valuable for him to be present.

Finally, of course, there is the method of direct observation of conditions and procedure. The auditor's eyes are always open not alone to matters of physical arrangement and convenience, but to the going methods and that indefinable thing, the atmosphere of the shop, which subtle as it is, frequently tells much about the workers' attitude.

In short, the auditor must have his wits about him at every moment of the day to discover ways and means of acquainting himself with the effects of the current labor policy of the concern.

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CHAPTER XXII

THE LABOR AUDIT CHECK-LIST

The check-list from which the investigator takes his cue as to the subjects to be covered in the labor audit, might conceivably be created afresh by each investigator in the light of the problem he is about to confront. Naturally some modification in subject matter is necessary in every different situation. But there is still a good case to be made in behalf of a check-list which will be reasonably definite, standardized, and exhaustive in character. It is definitely not our assumption that the form of check-list here discussed is necessarily the best that can be devised. It is admittedly a tentative and trial attempt toward a systematic itemization. We are not even interested in attempting to defend the present arrangement, since further experience is almost certain to lead to a rearrangement of topics. Its use here is simply illustrative and suggestive of one possible way of developing a method for factory study. For it is less important what standard form of procedure is agreed to, than that some standard form of procedure should be agreed to.

It may fairly be added, however, that the present topical arrangement has been used in the study of a considerable number of plants in over fifteen industries; and it has been found possible, under the headings and sub-headings of the labor audit as here outlined, conveniently to group and discuss all the facts regarding any situation which it has been necessary to analyze.

No one familiar with the extraordinary inter-relation of subjects in this field will deny that any grouping of headings is at best arbitrary. We shall, therefore, only attempt to explain briefly why subjects are grouped as they are; and shall not attempt, nor is it possible in a chapter of reasonable length, to state exhaustively what questions should be asked under each of the main headings. The treatment throughout aims primarily to be suggestive of a method of procedure.

Acknowledgment should be made at this point to the late Robert G. Valentine who was probably more instrumental than any other person in giving practical form to the idea of a

labor audit. The arrangement of the nineteen major topics was his, it was in association and partnership with him and Richard B. Gregg that the earlier check-lists were worked out. We have retained this arrangement of topics, both for practical use in plant studies and in teaching, not because it is thought to be perfect, but because it is valuable to have a grouping of subjects which is adhered to as standard practice over a period of months and years. And it is with this idea in mind rather than with any thought of being inflexible or dogmatic as to a schematic arrangement, that we shall discuss the contents of a labor audit.

Contents of a Labor Audit.—The topics of the labor audit may conveniently be grouped under three major headings. (1) The employment organization, which will be treated in the first seven topics. (2) The outside economic and industrial forces which the management cannot control but to which it has to make adjustment, treated in topics 8 through 16. And (3) the wages and total earnings, treated in 17 through 19. This explanation will help to make clear the reason for the order in which the individual topics occur.

It will be convenient to list at once the nineteen topics with their major sub-headings and occupy the rest of the section in indicating in a general way the subjects to be covered under these specific headings.

1. Physical working conditions
 - A. Fire hazards
 - B. Accident hazards
 - C. Ventilation and heating
 - D. Lighting
 - E. Cleaning and drinking water
 - F. Sanitary equipment
 - G. Seating and rest rooms
 - H. Dressing rooms
 - I. Noise and vibration
 - J. Health equipment, hospital, etc.
 - K. Factory exterior
2. Labor turnover
3. Work and job analysis
4. Sources of labor supply
5. Methods of selection
6. Methods of starting at work
7. Training
 - A. Job instruction
 - B. Foreman instruction
 - C. English instruction

- D. Inspection
 - E. Transfer
 - F. Promotion
 - G. Grievances
 - H. Shop control
 - I. Discharge
 - J. Suggestion systems
 - K. Relations to public schools
8. Economic beliefs
 9. Employers' associations
 10. Employees' associations
 11. Trade unions
 12. Joint relations
 13. Labor legislation
 14. Court decisions
 15. Labor law administration
 16. Community relations
 17. Form and efficiency of management
 - A. Production
 - B. Sales
 - C. Finance
 - D. Personnel
 - E. Coordination of staff departments
 18. Amounts and methods of pay
 19. Other provisions for employees
 - A. Accident compensation
 - B. Sickness insurance
 - C. Unemployment insurance
 - D. Pensions
 - E. Life insurance
 - F. Savings facilities
 - G. Purchasing
 - H. Housing
 - I. Transportation
 - J. Public health
 - K. Recreational facilities
 - L. Educational facilities

1. Physical Working Conditions.—It is obvious that a matter of primary concern to the auditor is the whole physical equipment and surroundings in which the employee works. These should be treated not simply from the point of view of the worker's consciousness or definite expression of satisfaction or dissatisfaction, since the worker may not be trained to detect unsatisfactory working surroundings. The check-list should be made on a basis of a really scientific knowledge of what constitutes healthful, safe and productive working conditions under which workers

may properly be asked to labor. We made at one time a labor audit of a plant where, to the casual observer, the industrial relations appeared satisfactory. The shop was a union shop which had worked under collective agreements for years without friction. But from the point of view of safe, scientific standards and modern factory working conditions there certainly was much to improve, even though none of those directly interested had complained or were especially alive to any deficiencies.

Since in the chapter on standards of working conditions we have stated the most important of the items in this field, it will be unnecessary here to do more than refer the reader to the list of topics there treated, as constituting the check-list on working conditions.

Only two additional observations need be made. There are, of course, legal standards governing many conditions. The labor audit is really auditing those standards and their actual enforcement in the plant in question; for too generally the disposition among managers is to feel that they are absolved from further anxiety about factory housekeeping because the law makes certain provisions and there are periodic official inspections.

Again, the labor auditor is not attempting specific advice in complete detail on all items of working conditions. He is rather trying to see the work of all the technical experts from the point of view of the *result of their expert work on the total success of the company's labor policy*. His is the last check on the relation of all items to employees' goodwill and interest.

2. Labor Turnover.—The purpose of the section on labor turnover is to discover the facts about the amounts, causes and costs of shifting among the employees and to consider the most immediate remedies. Where no records are kept, the facts which this section contains are made the basis for an argument in behalf of systematic record keeping.

Properly analyzed the data on labor turnover should furnish general clues to the auditor as to conditions in the plant which require special attention. This means, of course, that turnover figures should be analyzed before the actual plant inquiry. A simple device that the auditor can resort to in a plant with no records is to get individual foremen to mark down the number of people who leave their departments during the time that the auditor is there. In this way some approximate figures can be

obtained to indicate to the management how much shifting is taking place and how necessary further records are.

In some cases, the problem of the cost of labor turnover can profitably be dwelt upon. If there are conditions of high turnover at great expense which the company does not appreciate, there is value in suggesting the numerous elements of its high cost.¹

3. Work and Job Analysis.—It is the purpose of this section to give a statement of the character and elements of the work process, of the time factors,² of the effects of the work on the workers, and of the place and uses of job analysis.³

Having a background of the conditions of the plant, of the character of the work and the hours, the auditor can naturally turn his attention to the methods of securing the proper type of workers in sufficient numbers.

4. Sources of Labor Supply.—In this section the auditor is considering the problem of securing enough workers of the right quality. Methods of getting in touch with local agencies of all sorts are considered in order to determine whether there has been the best possible conscious cultivation of cordial relations with resident workers. In the recommendations, it is necessary in some cases to indicate how the plant's reputation in the community can be improved.

5. Methods of Selection.—An examination of methods of selection of workers means that the auditor has considered whether there are any existing and defined standards of employment for the given jobs—standards of health, age, education, previous experience, etc. He ascertains also whether actual specifications of the qualifications needed for different jobs have been made and are in use by the interviewer. The degree of centralization of the selecting function, methods of following up those selected—these are matters that are reviewed in detail. If there are special selective tests in existence—mental tests, physical examinations, or trade tests—the expediency of these is considered; and if some unused type of test is believed to be desirable, it is stated with the reasons.

6. Methods of Starting at Work.—Under existing conditions this section usually becomes an argument for instituting some more definite, formal and courteous method of introducing the

¹ See Chapter XX.

² Discussed in Chapter VII.

³ Discussed in Chapters XVIII and XIX.

worker to his foreman, his fellow-workers and his duties, than is customarily used. Facts about present methods of getting workers from the interviewer to the job are usually easy of statement, since little or nothing is done about it in many plants. It is necessary to indicate that the new worker often wastes much time in starting at work if he is not familiarized with the plant's layout and rules. Moreover, the value to be obtained from having a worker's first impressions pleasant is substantial.

7. Training.—The liberal labor auditor realizes that the personnel activities of the plant will be successful to the extent that they are saturated with the training motive. In dealing with people in a factory the management is touching individuals of whom it is literally true that if they do not grow and advance they definitely become static and lacking in vitality. Recognition of the educational motive means simply an appreciation that growth and development are normal demands of human nature; that since the worker spends the major part of his waking hours in the plant, there must during those hours be some opportunity for education and growth and widened horizons.

It will be especially true that the most successful conduct of the formal training work, the administration of transfer and promotion, consideration of discharges and of the rules under which the shop operates, will all require an active use of this training motive. For this reason these subjects are grouped under this heading. All personal adjustments will be handled most successfully when it is realized on both sides that *there is something to be learned before a satisfactory adjustment can take place.*

A. Job Instruction.—The effectiveness of the actual job instruction must first be established, and if there exists any formal training procedure, its working and success must be examined. If there is no formal instruction, it is almost always true that the facts indicate the need for such provision.

B. Foreman Instruction.—The whole problem of foremanship is considered under this topic, because of the major place that formal training must take in solving the problem of foremanship as it today presents itself.¹

C. English Instruction.—The necessity for English and naturalization instruction varies greatly from one community to another. The important thing for the auditor is to estimate the success of

¹ Discussed in Chapter XII.

the provisions that are being made, and to point to the need for instruction, preferably under community auspices, where it is not now provided for non-English speaking workers.

D. *Inspection*.—In so far as inspection work demands that the product be returned to the worker and its quality discussed with him, this is definitely a work of training.

E. *Transfer*.—Here is considered the company's policy regarding transfer. The method of handling this, and the degree to which it is encouraged in order to give variety to the work, are to be considered.

F. *Promotion*.—It is necessary to know whether or not the company has any deliberate promotion policy. If it has not, it is usually plain that a legitimate source of stimulus is being lost. And if there is a promotion system, it is necessary to know how effectively it works to equalize opportunity, and how the policy and its operation are made clear to the new worker.

G. *Grievances*.—It is important to know how grievances are handled. If there exists some form of shop organization, it is probable that grievances are handled through committee action, in which case this problem would be taken up in connection with topic 10, "Employees' Associations." But if no such machinery exists, it is necessary to know what provision the company makes for hearing and discussing minor differences, personal maladjustments and major disputes with its workers.

H. *Shop Control*.—Similarly, with the question of shop rules, questions arise concerning smoking in the shop, tardiness, unnecessary absenteeism, quarreling, drunkenness on the premises, and other matters usually spoken of under the head of "discipline."

I. *Discharge*.—The method of handling discharge is most important. If the function still rests absolutely in the hands of foremen, it is necessary to find out how much discharge there has been in order to determine whether the centralizing of this function would not result in its appreciable reduction. It is further necessary to know what the company considers causes for discharge, what knowledge the employees have of those causes, and what voice they have had in determining what causes shall be effective.

J. *Suggestion Systems*.—Suggestion systems administered in an intelligent way may be definitely a part of the educational procedure of the plant. It is therefore useful to study the working of such systems in this connection.¹

¹ See Chapter XV.

K. *Relations to Public Schools.*—More and more, as continuation schools are developed and as vocational courses are given, it will be necessary for plants to have close connections with the public educational machinery. And it should be a definite part of the labor auditor's study to see that this relationship is being maintained at maximum usefulness.

Finally, the question of the administration of all training work arises. The extent to which the administration of the training is centralized, the competence of the directing head, and the scope of the powers given to him, all require consideration.

8. Economic Beliefs.—Obviously, the dominating beliefs of management and workers will have a considerable influence in determining the labor policy and practice of the plant. The attempt in this section should be to set down tactfully, but candidly, those elements of the attitude, point of view, and opinions of the management which are especially inimical to successful industrial relations. Where there are strong beliefs which have the effect of fixed ideas, it is necessary to make explicit acknowledgment of this, in order that those directly interested may know the limitations under which their work is being carried on.

We have made investigations for a manufacturer who believes that a minimum wage based on the cost of living is "economically unsound"—that it is contrary to the fundamental "economic law of supply and demand." In such a case, it does little good to recommend that the employer fix a minimum wage in his factory which takes into account the cost of living. The more immediate task is to try to show such a man the way in which his belief complicates his own labor situation and detracts from the efficiency of his plant. At least it is of value to have the employer advised that one of his pet beliefs is exercising a handicapping influence in his business.

It is no less true that the underlying beliefs of employees are conditioning factors. As such beliefs are not always held unanimously, it is less easy to get a clear picture of this situation. But where, to take a not unusual example, there is a body of workers impressed with the belief that they must work slowly in order to distribute the work among themselves and to keep it going through slack seasons as long as possible, you have an attitude which must be openly faced, its causes examined, and the possible remedy considered.

It is immensely wholesome and helpful to have controlling

motives, which are often rather vague, crystallized into concrete shape and set down in black and white for examination. This process is often the first step toward a successful re-examination of the evidence and toward a desire to base beliefs on an examination of the facts, rather than on ideas absorbed through one's environment.

It is sometimes valuable to point out in this section that the employer has not made sufficient provision for keeping himself informed on the currents of ideas and activities at work in the modern world. It usually takes a certain amount of evidence to convince managers that it is good business for them to understand the economic forces or influences which are either directly or potentially affecting their plant, and to which they must of necessity adjust themselves—forces which are more varied and more active today than ever before.

9. Employers' Associations.—This section calls for a statement of the organized relationships which the employer has with other employers in the industry and in the locality. It is especially important to understand the policies of these organizations which affect the industrial relations of the members' individual plants. If, for example, a company belongs to an association of manufacturers which is strongly anti-union, that is an important fact to know. If, as sometimes happens, this sentiment leads employers to the use of a black-list and of private detectives in their plants, such a state of affairs is a fundamentally modifying influence in the personnel relations of the company. And until such connections are known and the policies to which they lead understood, some of the most subtle influences will be obscured.

10. Employees' Associations.—It is essential to know what provision exists among employees for organized action for any purpose. In this section will therefore be considered the work and success of every organization which is confined in its membership to the employees of the one plant. If there is no organization of employees, the question may well be raised in the light of the facts, whether an organization of employees might not be advisable in order that certain matters of personnel relations might be handled with more satisfaction where free channel of communication exists than where there is no opportunity for joint conference.

If, on the other hand, there are active employees' organizations, it is necessary to study them with some care, especially since the

tendency to introduce schemes of employees' representation from the top down makes it uncertain whether such bodies will be really autonomous and vocal of the workers' problems and desires.

11. Trade Unions.—The first question which arises regarding trade unions is whether there is a national union of workers in the industry in question. The auditor should know also whether the unions have local branches in the neighborhood of the plant. He will further inquire as to whether the management is familiar with the personnel and temper of the leaders of such unions, and what relationship and attitude exists between employers and union leaders.

12. Joint Relations.—Having established the fact that there are or are not unions which might be dealt with, the next question is: Are existing unions dealt with and on what terms? This leads to an analysis of existing collective bargains, written and unwritten.

In plants where no joint relations with the unions exist, but where the extent of organization among the workers makes it appear to the auditor that there would be real business values in a collective bargain, the arguments for such a relationship would be included in this section.

13. Labor Legislation.—This topic, together with the next two, has regard for the relation of the factory to the law. In large and thoroughly organized corporations, it would be true that the corporation's counsel might handle certain of the questions here raised. But as a matter of checking up conditions, the auditor must know what interest the company takes in labor legislation in its formative stages. Has the company, in other words, some organized way of following labor legislation and of acquainting itself with the practical effect of such legislation upon the industry?

14. Court Decisions.—The same question arises regarding court decisions. Has the company some organized method of acquainting itself with important court decisions that might modify the operation of personnel policies within the plant? Especially is it true, in matters relating to compensation law, that court decisions have an important bearing on the operating policy of a plant.

15. Labor Law Administration.—The administration of the labor law from the factory point of view means that there has to be some executive delegated to receive the various factory

inspectors, confer with them, and consider their recommendations or mandates. This is an important function, and study of the plant's organization is necessary to find out what provision the company makes for administering the labor law.

16. Community Relations.—Subjects having to do with community policies, but which have an important bearing on the plant, are considered under this section—if they have not been more specifically covered in other connections. Such matters as taxation and assessment, tariffs, and other less classifiable subjects are treated here.

17. Form and Efficiency of Management.—It is the purpose of this section to consider in what ways the form and efficiency of the operating management in the major departments of the business, reflect in any adverse way upon the successful administration of personnel relations. The auditor is not, of course, considering problems of production, sales and finance as an expert on these subjects. He should most certainly be qualified to study these other branches of management intelligently; but as a labor auditor his task is to determine how existing practices in these related fields exert detrimental influence on the administration of labor relations.

A. Production.—In matters of production, it becomes evident with a little reflection that if methods of production control are crude, so that work does not flow smoothly from department to department, or if methods of machinery maintenance are so insufficient that equipment is always breaking down, the workers are definitely handicapped by these conditions. Since this problem of efficient shop organization is at the heart of the problem of sound and amicable relations, the auditor should take time to probe as carefully as he can into any failure of the production organization to function smoothly. But it should be understood throughout that he is not primarily interested in criticizing production methods as such, that he is not an "efficiency engineer."

The audit undoubtedly can perform one of its most educational services by an exposition of the vital relation between the proper administration of these other staff functions and the personnel function. And usually the most time-consuming and significant part of the audit will be this effort to understand the extent to which inadequacies in production methods are giving rise to difficulties and complaints on the part of the workers.

B. *Sales*.—The problem of sales as it affects the labor relations of the plant is usually seen most vividly in seasonal trades. It can be said without fear of contradiction that today firms whose selling policy is reflected in spasms of irregular and overtime work are handicapped at a vital point in trying to establish cordial relations with employees; since one of the first elements of sound relationship is security in the tenure of employment.

C. *Finance*.—It may be less clear to the employer of the old school that problems of finance have a bearing upon his labor difficulties. But so widely is financial news disseminated today that the annual statement of any large corporation appearing on the financial pages of the press is at once seen by the workers of the corporation. One would indeed credit them with extraordinary stupidity, if they did not relate facts of financial prosperity to their own demands. It must inevitably come home with greater and greater force to all close students of the labor problem that facts about the financial condition of a corporation do throw considerable light upon its labor problem. One should know, for example, what burden of watered stock the corporation is carrying, what its policy is regarding amounts set aside for surpluses, depreciation and reserves.

D. *Personnel*.—Under this heading is analyzed and evaluated the existing personnel policy and organization of the factory as a whole. The competency of the members of the personnel staff, the adequacy of this staff to meet the needs, and the success of its policies, will be treated. One of the most important problems to consider here is the method of determining personnel policy. It is necessary to know to whom the personnel manager is responsible and who is responsible with him for transmitting the policy to all other executives in the organization.

E. *Coordination of Staff Departments*.—This leads properly to a consideration of how the policies of different staff departments of the business are correlated. The tendency is widespread for one or another of the staff departments—depending to a certain extent upon the strength of the personalities involved—to dominate the whole organization. It is necessary to understand clearly how policies of selling, production and all the rest should be related to each other in order to make the organization a harmonious unit.

No less important is a discussion of the way in which adopted policies are transmitted. It is being increasingly realized today

that the personnel department, for example, is successful to just the extent that it gets its accepted policies into action within the factory. And one of the most valuable educational uses which the audit can serve is to point out to dominating and overbearing executives on the selling or financial side of the business, the plain fact that they are acting in ways which may seriously handicap the maintenance of productive labor relations.

18. Amounts and Methods of Pay.—It is important to know how much workers earn; both what they receive in the pay envelope and what additional indirect compensations they get. The auditor will explain to the company why it is that the workers' annual income is of more significance from his point of view than the wage rate. Moreover, he will undoubtedly want to bring the wage figures into more significant groupings than mere flat weekly wage amounts. To be intelligible the wage amounts should be grouped by age, sex, kind of work, and length of service of the worker. It is only with the information in this form that the auditor is able to pass any judgment upon the question of the amounts of pay. He will reserve judgment, however, until he has familiarized himself with any local conditions which may make the cost of living vary from the cost in other localities.

From the point of view of the workers' attitude, the methods of pay may be almost as important as the amount.¹

Clearly no reasonable opinion can be expressed about a company's payment policy until something is known of the prosperity of the company; and in some cases of the entire industry. The idea has unquestionably gained wide acceptance that the lowest wage paid should be sufficient to assure a reasonably decent living to the worker. And the idea is gaining rapid headway, that not simply a minimum subsistence wage, but approach toward a *progressive, comfort* wage is not only ethically justified but economically imperative today. A further view that the successful company and industry have an obligation to "pass prosperity around," is held by a sufficient number of employers and workers to make it necessary for the auditor to call it to the management's attention.

Again, the auditor is usually convinced of the economy of high wages, and of the social utility of allowing both workers and

¹ Discussed in Chapter XXIV.

consumers to share by one device or another in the prosperity of the industry in question. To the fullest extent possible he should endeavor to have the management understand and act on this view.

19. Other Provisions for Employees.—Employees' total earnings will be represented not simply by the amount in the pay envelope, but by the supplementary advantages, however provided, which make their money go as far as possible, and allow them to enjoy those community provisions which in a real sense no one individual's money can buy. For this reason the following activities are considered under this heading:

A. *Accident Compensation.*—The method of providing workmen's compensation in case of accidents is an important item. In states where there are compensation laws, it will be necessary to know how adequate the compensation is, how easily the employee has access to the fund, and how long the waiting period is. It is also useful to know whether the company is insured in a commercial company, or whether it insures itself. The tendency seems to be for the self-insured companies to show a minimum of accidents.

B. *Sickness Insurance.*—The auditor will desire to know what organized provision is made for compensating employees in times of illness. If some type of group insurance is utilized, it will be a matter of proper inquiry to find out whether the employee can retain his insurance after resignation or discharge. If, however, provision for sick employees is made through an employees' benefit society, it will be important to be sure of the solvency of this organization and of the degree of integrity and efficiency with which its work of disbursement is carried on.

C. *Unemployment Insurance.*—Few corporations in this country have yet worked out a satisfactory plan for compensating employees in dull times or when there is no work. This type of compensation is, however, given by a number of the international trade unions. The item is included at this point in order to indicate that this is one of the exigencies for which the employer, the worker, and the community ought to provide.

D. *Pensions.*—A similar responsibility is increasingly being acknowledged regarding provision for old employees. Until the community as a whole is prepared to admit its responsibility for caring for aged workers, there is a definite responsibility upon employers, which is too frequently not met in any organized

way. It is important to understand the company's policy regarding aging workers. Are they discharged when they are a certain maximum age, or is there a policy of giving certain types of light work, or of pensioning them individually; or is there some more systematic provision?

E. *Life Insurance*.—With the increasing extension of group insurance plans, it is necessary for the auditor to find out whether the plan, if it exists, is working satisfactorily and fairly to the employees. It is useful to know whether the group insurance is compulsory or not, whether there are employees' contributions, and whether the insurance policy can be continued by the employee after he leaves the company.

F. *Savings Facilities*.—The fact that there is easy access to a safe depository and means of investment is an advantage to many workers. The auditor should assure himself that this provision is being made with the maximum of convenience and security to the worker, and know that it affords him an interest rate equal at least to the going rates of the locality. Inasmuch as the auditor in all his activities is looking for a chance for the educational motive to be displayed, he will be quick to inquire whether the encouragement of savings has been developed through an organization which the employees control or help to control.

Closely connected with the question of saving is the problem of the loan shark. It is important that the company have some defined policy toward the assignment of wages by its employees. Those companies which have been interested in hunting down the ingenious methods by which employees' savings are wiped out, have found that by undertaking an aggressive policy of making small loans, and giving free legal counsel to their employees, they have almost automatically eliminated the worst of the loan shark evil.

G. *Purchasing*.—Especially in times of high prices the saving to be effected by large scale buying is being appreciated by many firms and by their employees; and one or another type of company purchasing is being introduced. Under these plans, it is interesting to know whether payment is made in cash or by deduction from pay envelopes; also what part the employees play in the management of the purchasing plan; and to what extent the company is out of pocket for this type of service.

H. *Housing*.—The point of immediate interest in discussing

the housing situation is, of course, its effect upon the efficiency and character of the employees. The inquiry is not necessarily into the community aspects of the problem, although it will usually be found that any serious housing problem, due to a deficiency of houses or to poor quality of houses, is a matter in which the community must sooner or later take a hand. But the primary interest of the auditor is to make clear to the company the extent to which there is a direct relation between the attitude of the workers and the local housing situation, and the extent to which the company ought to concern itself about the problem.

Especially if there are company houses, a number of important questions arise, such as: Are rents paid by deductions from pay envelopes, or cash payments? How are the properties administered and kept in repair? What policy does the company pursue regarding eviction if employee tenants strike?

I. *Transportation*.—In the same way, the problem of transportation is of interest to the auditor to the extent that he finds that there is a relation between the transportation problem and the workers' attitude toward the factory. If, for example, the transportation rates are high, if the plant is inaccessible, or if the trolley service is infrequent, there may very probably arise complaint, due to the increased length of the over-all working day, which the delays in transportation create.

J. *Public Health*.—The same point of view is to be maintained in the consideration of the next three topics. Is there, for example, an organization of public health service locally which assures a wholesome and healthy community? To the extent that this is an adverse factor the management should be acquainted with it.

K. *Recreational Facilities*.—It is becoming axiomatic today that workers will not stay long in a community which does not boast a reasonable variety of social life. This problem may arise more conspicuously in small localities than elsewhere, but under any conditions it is necessary for the auditor to satisfy himself that the workers have access to recreation which is congenial to them and of a character and price that is satisfactory.

L. *Educational Facilities*.—As soon as the worker has children who are of school age, the nearness and efficiency of the public schools will be a determining factor in his movements. With the more ambitious workers the night school facilities which a com-

munity provides will also be a factor. In any case the important thing for the auditor to bear in mind is that the character of the public education system may have important bearings upon the stability of the plant's working force.

Mechanics of Presentation.—In concluding the labor audit, the auditor usually emphasizes the value which the company would derive from having a careful study of industrial relations made recurrently at yearly or half-yearly intervals. And he can well point out that the form of report herein set forth offers a convenient method of recording and comparing the facts.

As a further matter of technique in presentation the following points should be stressed:

There should be a good index at the beginning of the report. There should be at the outset a concise summary, a few pages in length, indicating the high lights of the report and of its recommendations.

It will usually be simplest to have recommendations on each subject follow immediately after the section of the audit in which that subject is treated; then for purposes of reference have the most important recommendations brought together again at the end. In connection with this summary of the recommendations it will usually be invaluable to suggest the order in which the auditor believes the recommendations ought to be carried out—the relative urgency of the several problems.

Experience shows that the finished report will constitute a typewritten document anywhere from 50 to 200 pages long. It will inevitably seem to the management that this is a bulky—perhaps unduly bulky—statement of facts and conditions. For this reason it should be strongly urged upon the executives to whom the report goes that it should at first be *read as a whole and in so far as possible read at one sitting*. It is extremely important for the executives *to see all around the problem at once*; and this end can be most readily achieved if the audit is read through at one time. The executive can then go back at his leisure and study particular sections.

Two other possible contingencies may arise. In the first place, there are plants where two or three problems are found to be so outstanding in their influence that until they are stated and understood nothing else about the plant matters. In cases of this sort it is good strategy to preface the audit by an analysis of these major problems, and then to follow it with the

usual treatment of the other topics. This method has the value of greater emphasis and directness of treatment of the salient difficulties.

In the second place, there are executives who are poor readers. They feel that they have not the time, and therefore they have not the patience to absorb in detail an elaborate document. To be sure they are mistaken; they are usually trying to see in unduly simplified terms a problem which is inherently the most complex of all the problems of the plant—the problem of human relations. But such men have to be reached and influenced. It may possibly be found that a re-arrangement of the nineteen topics under a fewer number of headings with the omission of much detail will be a more convenient form of presentation, after the longer draft has been prepared. The following re-arrangement of topics may be of use in such cases. The numerals in parenthesis after the topic refer to the topic number in the audit.

- A. Working conditions (Topic I)
- B. Work process and organization (Topics II, III, IV, XVII).
- C. Terms of employment (Topics III, XVIII, XIX).
- D. Methods of relations with employees (Topics V, VI, VII, X, XI, XII).
- E. Points of view (Topic VIII).
- F. Community conditions and relations (Topics IX, XIII, XIV, XV, XVI, XIX).

Another way of handling non-reading executives is to read the report to them and discuss it in a series of conferences.

Uses of the Labor Audit.—The practical uses of the labor audit should be summarily considered from four points of view; the uses to the general management, to the personnel manager, to the workers, and to the community.

To the Management.—The audit is useful to the management as a method of standard record and careful analysis. But the material incorporated in its individual sections, together with the recommendations, can also profitably be made the topic for discussion and for educational work in executives', foremen's and workers' conferences. In a plant already well functionalized, the different sections of the report would naturally be turned over for action to the executive charged with the responsibility for the function under consideration. But more than this is necessary. The audit has been made from the point

of view of assessing the all-around human and social solvency of the organization or institution. And to the extent that this all-around point of view can be imparted to all members of the executive staff by reading and discussing certain portions if not all of the audit, to that extent the broadest educational purpose will be served.

The audit can also to a certain extent give the management a good estimate of a personnel department's working efficiency. It can, in other words, be an audit of the personnel department. But it is more than simply a statement of conditions. It should be definitely a working manual, which in the hands of all the personnel executives can be used as suggestive of a point of view and of new methods.

Where new executives are being introduced both into general executive work and into the personnel department, it is convenient to have in fairly compact compass a statement that makes clear to them how the company's labor policy is operating. If a labor audit is turned over to such new executives to read they can be quickly instructed in the policy and methods under which the company operates. As a document for the instruction of new executives the audit can have peculiarly significant values.

Again, the conscientious and enlightened employer, who is appreciative of his social responsibility, should be able to find in the audit an estimate of the human solvency of his business. He should be able to get a clear picture of the problems which remain for the plant to solve, of the immediate steps he should take toward their solution, and of the larger problems he should have in mind to work on over a period of years.

The terms used throughout this chapter are suggestive of the application of the audit method to a factory or store. But practically the entire technique can be applied also to an office, a city department, a railroad, mine, hospital or any other institution where there is a relation of employer and employed. With obvious modifications the labor audit can be of great service to the management of all types of organizations.

Uses to the Personnel Manager.—From the point of view of the personnel manager, the labor audit has certain values which are to be obtained in no other way. It enables him to know all the elements of his problem. This knowledge of the all-around aspects of the situation with which he is dealing is indispensable to the forming of a right and adequate policy. It enables him

to frame and suggest a policy which is calculated to meet his problems in a fundamental way. It enables him to sell his policy to the organization with maximum effectiveness. It enables him to carry on his own administrative work with greater success because of his greater knowledge. And it enables him to improve his policy and practice because of the estimate of its effectiveness which he has secured in the audit.

Another use of a different kind should also be mentioned. The personnel manager may, if he is casting about for a method of filing the flood of pamphlets and clippings on employment work which pour in upon him, find that the topical arrangement of the audit with its sub-topics affords a convenient *method of filing*.

Uses to the Workers.—The time has now come to meet, and meet with emphasis, one possible objection which may arise to the labor audit from the workers' point of view. It may be said that the audit is simply a device to inquire into the workers' grievances before they have reached substantial proportions and to forestall by preventive measures any vigorous or direct action on their part. It may be objected, in other words, that the labor audit is being used to maintain the employer securely and with a better conscience in the control of a situation which may, from the broadest point of view, be precarious and unsound. From this point of view, the audit is being used to salve the employer's conscience and equip him with methods of administration which enable him to maintain himself more securely in a basically autocratic position.

The answer to this objection is clear. The labor audit is primarily an instrument of inquiry. It is an instrument used to discover unscientific, inhuman and socially inexpedient policies and methods in the labor relations of an organization. In so far as it is an instrument of precise analysis it stands on its own feet and is of use to anyone who is in search of a method of exhaustive study. The fact that a weapon of any sort is capable of dangerous misuse has never been an argument against its use. It has simply been an argument for its use *in the right hands and with the right purposes*.

As a matter of fact, it is clear to us as a result of investigative work done both in union shop plants and in public utilities, that there are substantial values to be derived from the use of labor audits by the organized workers and by the community. We look forward to the time when the organized workers will on

their own behalf (or jointly with the employers) undertake just such systematic analysis as is here recommended, of the conditions and terms of employment under which their members work. Increasingly, as the unions see themselves in need of accurate facts, both for the protection of the health of their members, for their instruction and for the information of the public, they will see the need of a method of inquiry which will at least approximate that of the labor audit.

Considering the objection that the recommendations of the audit may indicate methods of procedure which will perhaps make the workers content with a relationship which is fundamentally inequitable—the answer is that in the use or abuse of this method much depends upon the point of view of the auditor. His recommendations may be far-sighted or they may be of only temporarily alleviative value. But whoever owns the shop and whoever controls the shop, the problem of maintaining a cordial relationship between manager and managed persists. In the administration of that relationship, as well as in the administration of the correlation of the different departments of the factory, there is under any ownership the necessity for as scientific and precise a method of organization, practice and analysis as can be devised. The recommendations of the labor audit are to a considerable extent preoccupied with the perfecting of the organization in these matters. But if, in the mind of the auditor, the present relationship of the capitalist or manager to the workers has in it inherent elements of unfairness or injustice, there is no reason why the auditor should not point that out in his audit.

In short, these objections to the use of the audit, while they should be borne in mind as warnings, are not really serious. And it is to be hoped that organizations of the workers and of the public, as well as managers, will extend the use of this method of fundamental analysis.

Uses to the Community.—As the public responsibility for the proper conduct of the public utilities is more and more stressed, and to the extent that assertion is made that the “interest of the public is paramount,” it will be a public obligation to have the facts about the operation of the labor policy of public utilities constantly at the disposal of the public. Most of the material that a labor audit contains should not simply be a matter of public record where public service corporations are involved; it should be a matter for deliberate publicity in published reports, newspaper write-ups, pamphlets, bulletins, etc.

In some of the most critical, recent strikes in street railway transportation, for example, if the public had known accurately what the facts were, in advance of the interruption of work, it would have brought pressure to bear on both sides to effect a modification of policy and practice which would have made a strike altogether unlikely.

But there is a wider field for the audit's usefulness. It is increasingly recognized that state industrial commissions have not simply a regulative, but a preventive and constructive function. In order successfully to perform that function for all of industry there is needed more information about every factory, a more penetrating and inclusive view of each factory's problem. The time may not be far off when state labor commissions and the U. S. Department of Labor will institute what will in effect be bureaus of labor audit and research.

Results of the Labor Audit.—The results of the labor audit hinge largely on two factors: On the character, capacity and conviction which the auditor himself carries, and on the inclination of the interested parties to act upon the recommendations which are made. Assuming that these two conditions have been met, it is possible to indicate several tangible and beneficial results.

In the first place, the audit should increase the ability of those who determine personnel policy to see that policy as a rounded whole, to see that there are no panaceas in this field, and to see that a great variety of problems must be attacked, if conditions are to be bettered and more just relationships established. This is an incalculably desirable result since it will check the tendency of executives to pursue hobbies and panaceas as solutions.

But a more positive function should be served in the laying out of a long-time program and plan of personnel activities on which a company can soundly work for some years to come. In other words, there results from the audit a new sense of *significance* and *direction* in personnel policy.

From the point of view of labor organizations the results of the labor audit will look in the direction of getting both the conditions and the government of industry upon a fairer and more equitable basis. The immediate result will be to inform organized workers in a concrete way as to the practical success, from their point of view, of the existing structure of government.

It can finally be said that as soon as the labor audit is used as an instrument of public investigation and oversight in industry,

it will bring to light a vast number of discrepancies and inadequacies in the administration of industrial personnel work, which will be almost automatically corrected once the light of day is let in upon them.

Robert F. Hoxie well characterized the existing condition which the labor audit is calculated to correct, when he said that "in labor contests no foreknowledge exists; there is no machinery for getting it, no enlightened public opinion; there is arbitrary disregard of public rights, false claims and a helpless public."

"We must," he continues, "have means for developing a body of exact and truthful information, developing common standards of right and justice (maxima and minima or rules of the game), developing a real public opinion back of them, developing a constructive social program, getting centralized, strong, able, elastic administration and enforcement of laws, with a view to the whole situation; getting and applying knowledge and standards to control, and in the settlement of contests, creating to this end social interactions. This understanding and knowledge can be secured only by the closest first-hand study in the field. It is all a matter of doing the work in a calm, orderly, large-minded and farsighted, constructive and scientific manner."¹

Professor Hoxie has well expressed the larger function of the labor audit. It is to supply knowledge, discuss method, and evaluate personnel policies in a temper which is large-minded and farsighted. It is to inject into the discussion of proposed constructive policies for industry a realism and concreteness which will keep everyone's feet planted firmly on the ground. It is to create a sensitive regard for practical and helpful suggestions which are of permanent value, because they are elaborated in the light of a clearly defined and socially wise purpose of industrial growth and service.

The problem of control and of authority is indeed basic in modern industry. But progress will be halting and subject to violent transitions, unless all parties to our economic life address themselves in a public spirit to the task of applying knowledge and standards in the field of control. The labor audit's justification is the aid it can bring in this discovery of fact and standard, and the dispassionate spirit which it can help to cultivate for the discussion of sound methods of government and administration in industry.

¹ HOXIE, R. F. Trade Unionism in the United States, pp. 374-5.

CHAPTER XXIII

THE ELEMENTS IN WAGE DETERMINATION

The problem of payment occupies a position of central interest in the industrial world. "How much do you pay?" "What is a fair day's wage?" These two questions are immediately put by workers on the one side and employers on the other. Over wages, piece prices and payment plans, controversy seems endless; the differences seem often insurmountable.

The need is clearly for a fresh approach to the problem; for an attempt to see if any standards exist or might be established, if any broad principles may be agreed upon which tend to narrow wage discussions within reasonable limits. And it is the purpose of this and the next chapter to consider the present attitudes and standards of managers and workers toward payment, and to see if they suggest the line of development which a more stable and scientific payment procedure might take. We shall not, however, attempt to cover ground already covered by other writers¹ in description of the great variety of premium and bonus plans. Our purpose is rather to see with what determining beliefs and attitudes both sides approach the problem.

The Employer's Point of View.—Three distinct points of view about payment are distinguishable among employers. They may be characterized as (1) paying the going market rate; (2) paying enough more than the market rate to buy greater interest and create an incentive; (3) paying in relation to several factors—as *e.g.*, cost of living, years of service, profits of the business.

Undoubtedly the first of these points of view is still quite prevalent. This is the theory which squares with the so-called "fundamental law of supply and demand" on which the older employers were brought up. It implies that the market rate is set as a function of the relation between the supply of workers and the demand for them. Labor in this view is a commodity, the

¹ For an exposition of existing wage schemes, see JONES, E. D., Administration of Industrial Enterprises, Chapters XIII and XIV.

See also the Questionnaire Digest on Methods of Wage Payment, Western Efficiency Society, July, 1918.

value of which rises and falls with the availability of the supply. Asked what determines the amount of wages, the employer who holds this view will answer: "It depends on how much we can get workers for. If there is a crowd around the gate we can offer less; if we need more workers than there are in sight, we must offer more." This notion gives rise to the attitude that, "we pay as little as necessary and then do all we can to get as much work as possible."

This frequently met but surely over-simple analysis of the wage problem is now superseded in the thinking of those employers who make any claim to enlightened self-interest, by another point of view. The idea is gaining ground that not low wages but high wages bring low costs. It is desirable, in this view, not merely to buy so many foot-pounds of a worker's energy, but to create some incentive. Piece rates are offered with this idea in mind; all the numerous differential payment and bonus schemes work from this basis; and many of the so-called "profit sharing" plans and methods of easy purchase of company stock have this end in view. If the worker realizes that the amount of wage is conditioned by his own effort, his efforts will be more sustained and the production greater.

But it is definitely a part of this whole idea that whereas wages will be higher than under the market-rate theory, they will not by any means be high enough to absorb the whole, or even any large proportion, of the saving in costs which results as soon as the number of units of output per hour or day is largely increased. Fundamentally, this point of view is closely related to the market-rate theory, since here also the effort is in the direction of paying as little as necessary (although it is seen that more than the market rate is necessary) to get as much work as possible.

In plants where either of these two points of view are held, the simplicity of the case may be destroyed by the entrance of collective bargaining under which the workers aim by their organized power to get a base rate which seems to them more equitable than that based on "supply and demand." However, to the extent that the employer finds that the union scale does buy a reasonable interest and incentive, collective bargaining need in no way conflict with his purposes or the security of his rate of profit.

There are, finally, an increasing number of managements which desire to get a more "sound" basis of payment. The usual tendency in the plans of these employers may be briefly outlined as

follows. They set a minimum wage in direct relation to the cost of living. They attempt to evaluate a number of elements in determining pay, as for example,

rate of production
 spoiled work or damage to equipment
 years of continuous service
 lateness and absence
 number of major processes worker can do
 monetary responsibility placed in hands of workers
 cooperation and conduct.¹

They may also attempt to make some permanent, regular and stipulated distribution of the entire profits after agreed deductions for a limited dividend and other usual charges.

To employers in this group and in an inquiring frame of mind regarding a sounder system we suggest that a careful study of both parts of the payment plan hereafter discussed will offer practical aid. To employers in the other two groups, we suggest that even if the second part of our proposal (see next chapter) seems a long way ahead, there are good business reasons for making use of many of the principles set forth in the present chapter.

The Employees' Point of View.—Current facts about wage questions also include the employees' attitude. Here, again, we find three fairly distinct points of view; and they parallel in a significant way the various attitudes of employers.

There is, first, the "get away with it" attitude; the point of view that the worker "will do as little as necessary and get as much pay as possible"—the direct and inevitable response to the employer's similar attitude. Although widely held, this view is always likely to be modified in one of several ways.

There is in consequence a second, less simple view that if more than the market rate can be obtained, more work will be done. Normally the worker whose vitality is not impaired and whose education in subservience has not been too complete, will want to earn as much as possible and will, therefore, respond to financial incentives. Again, he desires promotion and he realizes that this only comes as he makes a good showing at his present job. Finally, the instinctive desire to contrive—the instinct of work-

¹ BABCOCK, GEORGE D., *The Taylor System in Franklin Management*, pp. 79-108.

manship—is not wholly dormant, and it demands some expression through the outlet of “doing a good job.”

But this second, more complex motivation is likely to be further complicated by certain reservations, which at least the more intelligent workers can be counted on to make. First, they realize that under most of the bonus schemes the company not only gets much greater output but it gets it at a progressively less cost per unit, the bonuses rarely absorbing as much as 50 per cent. of the saving in costs when production is increased.

They find also that bonuses are usually offered for individual or gang effort under a regime of individual bargaining with the consequent danger that if certain individuals do “too much,” the rate will be cut and the less skilled workers be forced out of a job or over-speeded. And rather than be bribed, even at considerable immediate personal gain, to continue the individual bargaining basis, workers frequently prefer to see a moderate level of rates assured for all under a collective agreement.

Again, where the incentive is in terms of profit sharing or stock participation, workers tend always to be suspicious unless the basis of the plan is clearly understood by them; unless it is in the form of a definite, binding commitment in advance by the company; and unless they have some share in its administration.

There is, in the third place, an attitude rarely met among workers because the conditions are seldom such as to bring it into prominence—the attitude that the worker wants the real human satisfactions out of his job. This means that the job is to give as large a return in cash as possible; that the conditions surrounding the work are to be made right; that the job itself is to offer a genuine medium of expression for the individual’s talents and desires. This attitude is indeed rare today; but it is not too much to say that something very nearly approaching it is the necessary condition of a sound and productive industrial system. If it is an “ideal” attitude for workers to have, it is an ideal worth studying to make real.

A Basis for Common Action.—The foregoing résumé indicates a clash in points of view which is acute today. There is felt to be a divergence of interest regarding payment; and there is all too little chance to discuss that divergence and secure a common basis of understanding and action. In consequence we find ill-will, suspicion and distrust on both sides; and a disposition to regard any agreeable adjustment of the problem as impossible.

It seems to us, therefore, that if some common basis in knowledge can be reached, if some common meeting ground for discussion can be obtained, if some decision can be reached on agreed principles of wage determination, and if some temporary adjustments are possible on a basis of an application of the principles to the agreed facts—then, and only then, can managers hope for some relief from arbitrary conflict and perpetual bickering. These four points deserve, therefore, careful examination. Can there be common *knowledge* about payment, a common *meeting*, certain common *principles*, and agreement on actual adjustments? We shall next consider the place of facts in the payment problem.

The Fact Element in Payment.—There is a growing disposition to give attention to more than one or two factors in determining pay. At any one job it will be necessary to *make a selection* of the factors which it is agreed shall have weight in reaching decisions about the pay. We have, therefore, in the following list included a large number of items from which such a discriminating selection can be made as the character of the job warrants. We do *not* say that all these items necessarily require statement in relation to *every* job.

First in importance stands the *cost of living*. More and more, companies are realizing that wages which at least equal the cost of living are a necessary charge upon the business. They realize that if machine maintenance is important, the adequate maintenance of the really active and sentient factor in production is doubly necessary. It would seem hardly a matter for dispute that if people are needed at all for manufacturing work, they must be paid enough to preserve health, vigor and strength—to maintain their productive power. The only reason why this has not become a truism is that this country has been able to rely upon a constant inflow of foreign workers who either were able to get along on low wages because of a simple standard of living or who did not stay long enough on a job to feel to the full its ill effects. Now that this inflow is restricted and the idea of extending the American standard of living to all workers is spreading, the use of the cost of living standard to help determine minimum rates of pay will inevitably spread.

Amount of output is a factor in determining pay. We have already elaborated our ideas about the study and joint determination of different grades of competence at a job.¹ These

¹ See Chapter XIX.

grades should be fixed by a correlation of several factors of which the quantity of output is the first.

Quality of output is the second factor. At those jobs where quality is definitely determinable, there is every reason why it should figure in determining a worker's pay.

Material cost is the third item to be correlated in fixing of a worker's grade of competence. We include under this term several elements, some or all of which may be measurable at any one job; for example, amount of power consumed, cost of machine maintenance, amount of oil used, amount of waste, spoilage of work or equipment.

Time factors would be the other element in making up a worker's grade. Regularity of attendance and lateness would be especially considered here.

Previous education necessary will vary with the job; and it is naturally true (if there is to be any pay differential at all) that the job for which one can qualify with no schooling will pay less than the one requiring a grammar or high school education.

The amount of job instruction necessary also helps to gauge the degree of skill required. The trade which it takes four years to master is normally going to command more than the job which is learned in two weeks.

Length of service is in some occupations made an important determining factor. This is especially true at work where the obvious technique is easily learned but where the worker's value increases with the years because of his reliability, more perfect command of the job and the more complete confidence which it is possible to repose in him.

Hazards of the job sometimes affect the pay favorably to the workers; sometimes they do not. It certainly seems, however, to be a plausible conclusion that when there is an increased risk of sickness, accident or even death constantly present, the necessity for the worker's making exceptional insurance provisions justifies high pay. Moreover, as workers come to discriminate, it will be necessary to pay a differential to induce them to engage on more hazardous jobs.

The disagreeable character of work will tend to play a larger and larger part in determining pay. It is one of the anomalies of an over-supplied labor market that those who do the most disagreeable work receive the least pay. But as the supply of illiterate labor is reduced, there will necessarily be placed a

premium upon that work which is carried on under unpleasant conditions.

Possibilities of advancement in some cases affect the amount of pay. Where these possibilities are good, that often has the effect of keeping down the rates at the lower grade job, as the increase in pay comes with promotion to the higher job.

Wages in the community will usually be an influential factor. Especially will it be useful to know the rates paid at jobs of a character comparable with those under consideration. This information will, however, be of greater interest in relation to minimum rates than to any other.

Wages in the industry afford even more significant data than do those in the locality. Similarly here they will be primarily of interest in relation to the setting of minimum rates. The wage figures of competitors are at best misleading, however, since what is really significant is *the amount of product per dollar of pay roll*, and the amount of workers' yearly incomes rather than their hourly rates. Wages are only loosely comparable; unit costs if compiled by different shops in identical ways give a more accurate basis for comparative study.

The extent of demand for the product will in the long run exercise great weight over pay. An industry with a falling market is never in the same position regarding wages as is an industry with a rising market. And what is thus obviously true in these extreme cases, is still true where the changes in demand are not so quickly demonstrable nor so rapidly felt.

The amount of profits of the business is already admitted to be a factor in determining pay in many cases. Where wage rates are on a sliding scale fixed with relation to prices; wherever in addition to wages an annual bonus is given based on a per cent. of wages paid out of profits; wherever monopoly conditions have given rise to large profits and higher than current rates are paid; it is roughly true that in all these cases the amount of profit is a factor in the determination of wages. And it is certainly further true that the company which is known to be profitable is more likely than the less prosperous one to be besieged with demands for larger pay (with the exception that the more prosperous company may resort to repressive practices which keep "agitation" at a minimum).

Ultimately, *methods of financing* the company will have an effect on the payment situation. Policy as to the amount of

outstanding stock in relation to physical valuation, as to amounts at which patents, trade marks and goodwill are capitalized, amounts set aside for depreciation, for reserves, for surplus and extensions, will influence the finances of a corporation appreciably; and the eventual connection between decisions on all these matters and wage determination can become very close.

Finally, the policy regarding *the relation between wages and salaries* will be a factor. If the company has an established procedure regarding minimum wages, that sets one definite bottom limit to pay. If, also, it has a scheme of salary maximum in each classification and of a specified range of salaries in each grade of executive position, that further defines financial obligations and the charges to be met.

Sources of the Facts.—Before discussing *who* is to secure all these facts and *how* they are to be used, we shall indicate briefly *where* they are to be found.

Data regarding cost of living is available in the monthly reports of the United States Department of Labor, which give figures at monthly intervals for typical, selected cities throughout the country, showing fluctuations in terms of a theoretical family budget, retail prices of selected commodities and selected wholesale prices.¹ These figures may be checked against those of the Times Annalist index figures, the Dunn and Bradstreet index figures, and other occasional studies of a public or private character, important among which should be mentioned the findings of minimum wage boards as to costs of living for single adult women.

Data regarding amounts of output, quality of output, material costs, time factors, previous education necessary, amount of job instruction necessary, hazards of the job, disagreeable character of the work, and possibilities of advancement, will all be provided in the job analysis of each job. And production and employment records would naturally be available to supplement the analysis.

Data concerning wages in the community, wages in the industry and the amount of demand, involve wider industrial contacts; but much of this material can usually be secured through chambers of commerce, boards of trade, and the national trade association of the industry.

¹ See numbers of The Monthly Labor Review of the United States Bureau of Labor Statistics.

The rest of the data—profits of the business, financial policies and provisions, and salary policies and provisions—is, of course, usually considered today to be the special private property of those in ultimate control. It is usually all available, however; and where—as in the case of corporation tax returns, excess profits tax returns, and Federal Trade Commission investigations—the public demands this data, it is produced. Indeed, we have come to regard as essential the compilation of this data for public use from public utility corporations. And many firms, once started on the road of profit sharing or employee representation in management, find it not only expedient to make this information available to manual workers, but a necessary condition of the success of their plan.

Securing the Facts.—The next question therefore is: Who is to compile the facts and how are they to be used?

In discussing the making of job analysis we cited several reasons for having employees participate in this work. Briefly they were that

Employees have certain facts about the job which no one else has.

Employees will agree to findings and adopt them, only as they take a hand initially in formulating them.

Employees will feel that their interests are adequately protected only as they have representation in the deciding of process problems.

Employees know that all elements in the analysis are not matters for objective measurement; that on matters of opinion or desire, their opinion and their desire are as important as anybody's.

And when now we come to ask who is to decide the wage amounts, we are forced to ask ourselves whether *the same arguments which point toward joint job determination, do not point with equal force toward joint pay determination.* Each of these four arguments for joint action on work should, we believe, be considered in relation to pay.

In relation to the cost of living, for example, employees know from experience how much they have to spend per week. They, and they alone, are really in a position to tell how closely the available cost of living figures apply to their local situation. The company's compilations on this subject may be as "scientific" as you please; but if, with existing standards of living and habits of consumption, local employees can demonstrate that wages are inadequate, their claims must be recognized.

It may possibly be true that there is something wrong with

their existing standards of living or habits of consumption—but that is another question. We take it that if the employer has any duty toward his employees in educating them to improved standards of consumption, the method of that education would certainly not be by a curtailment of amounts in the pay envelope. People learn to consume by consuming; and a certain amount of what might from one point of view be characterized as “foolish expenditure” is a necessary part of every individual’s self-education in consumption. So true is this that a wage at the “comfort minimum” ought definitely to include an item to allow for outlays made in the interest of educating the individual’s taste and judgment.

It is further true that only the workers themselves can speak for themselves, not merely as to what they need, but as to what they want. What they want may seem unreasonable—under certain conditions it may even be unreasonable; but the air is kept clearer, action takes place in closer relation to knowledge, if what the workers want is openly known and jointly considered.

It is, turning to the second argument, preeminently true of wages that in the long run workers acquiesce in a wage scale only when they have had a hand in framing it, or in proposing it. However passive their acceptance of rates may seem to be, it is usually true that rates have been set in relation to what some official *thought* the workers would accept. This guess may be right; but it is less and less likely to be right as time goes on. To rely upon such a guess, therefore, would seem to be a most precarious way to fix wages; especially when the sensible alternative of talking it over stands so readily at hand.

In the third place, the idea of representation of interests is gaining such rapid headway in industrial organization, that it is not unwise nor surprising to see it applied to the critical matter of wages. The protection which employees want in payment matters, *they themselves are alone competent to secure*. If the management wants to cut costs, the likelihood is that it will start with the reduction of labor costs. If it wants to cut production, the likelihood is that it will cut the pay roll. If the workers have any voice at all, it is easier for them to forestall resort to those two paths of least resistance. And this, we seriously urge, is really a good thing for the management. It is thus checked from a course of action which is almost always short-sighted, and is turned to other measures of economy which are usually more effective because more fundamental.

It is, finally, truer even of pay than of work, that the element of opinion and desire is important. The discussion of pay can profitably be narrowed by a knowledge of the facts so as to be carried on in relation to the possibilities, reasonableness and expediencies of the situation; but within those limits the determining considerations are not facts but relative persuasiveness and bargaining power.

So long as preponderance in bargaining power remains with the management, as it does under individual bargaining, wages can be arbitrarily set and many of the factors above discussed ignored altogether. But surely the situations in which such arbitrary action can safely take place are fewer today than ever; and they will be fewer tomorrow than today. In short, *it is shortsighted business policy to reckon without the desires and aspirations of the employees.* Perhaps the employer who thinks he "can make his pile in ten years and then retire," can afford to be thus shortsighted. But certainly no other employer can.

Possible Objections to Joint Determination.—But there are certain objections to making payment a matter for joint determination. The chief one is the fear that employees will so raise wages as eventually to bankrupt the concern. There is but one answer to this. Wherever employees, either in shop committees or under collective bargains, have conferred with management on wages, there has been little evidence of a desire to be extortionate. The workers in a given situation are usually among the first to understand that the terms of employment must be such as to allow the firm to remain in business and hold them securely in their jobs. Indeed, only by joint conference can employees learn those facts which they must have if they are to agree to intelligent decisions about payment.

Another objection is that such conferences and "haggling" take time. This is true. So do strikes and lockouts take time and money, and generate ill-will. Happily the time spent in adjusting pay questions is time from which educational values may be derived by both sides. Conference that is to the point, as well as frank and exhaustive in analysis and agreement upon facts, is always educational. It indicates to the workers the goodwill of the management; it shows to the management the point of view and desires of the workers. And such *personal knowledge by each side of those on the other is an indispensable condition of cordial working relations.* Some concerns believe that personal

contact can be secured through parties, picnics, social and athletic events which the executives attend. These may be of some supplementary value. But the personal contacts which are truly valuable are those involved in furthering the work of production. For these contacts are more likely to be natural, necessary and spontaneous.

The time spent in conference in individual plants is reduced to a minimum, however, wherever a district-wide collective bargain exists. Indeed, where such bargaining prevails on a district scale, we favor the application of these same principles of *joint job analysis plus joint pay determination based on that analysis, to the district under the direction of a representative district board or conference*.¹ In these cases the work of pay adjustment in each shop is reduced to an interpretation of the application of the agreed rates to the individual operation, to consideration of the possible local variations in job content, to consideration of piece prices where a piece work system prevails, etc.

Conferring on the Facts.—We find, therefore, sound business reasons for advocating the determination of pay by the method of conference with those at the job. We shall next consider what shop organization is required for wage conference; and see if it does not parallel that already suggested for job analysis conference. The affected interests which should have a voice on wage problems when consideration of those problems takes place wholly within the shop,² are:

- (a) A representative of the financial management.
- (b) A representative of the personnel management.
- (c) A representative of the head of the department involved.
- (d) One or more representatives of the workers at the job.
- (e) A representative of the employees as a whole.

Each of these groups clearly has a place in any conference which is to settle or recommend wage rates, since each brings to the

¹ Much is already done in this direction under the protocols and collective bargains in the garment trades throughout the country. Usually there is in each shop, a shop committee or a price committee to confer with the management on the local application of the terms of the agreement.

² Our application of this idea under collective bargaining conditions will be subsequently referred to. Our assumption that jobs and wages are being defined on the basis of the individual shop, by no means indicates that we think this to be the most desirable method. It happens to be a widely prevalent method and we, therefore, here consider it at length despite its obvious limitations.

settlement of the problem a necessary judgment and consent. In determining the wage rate for a job, the workers at that job would choose representatives from their number and the job delegates would in most cases need to be the only members to change, as the committee deliberates on one job after another.

When this Wage Rate Committee starts to work, there has presumably already been prior agreement in the joint job analysis committee as to the number of "grades" to be recognized and differentiated in pay. There has, also, been either a definite agreement as to what factors are to have weight in deciding pay; or a tacit understanding (in which the really fundamental issues are ignored) that only the usual and obvious factors (such as prevailing market rates) shall have weight.

The company which for any reason is not prepared to attack the payment question fundamentally, will nevertheless do well to confer in committee on wage rates; only it does not by this act alone lay *all* its cards on the table. And we admit that there are plants where it may be a long time before employees would ask them to.

But in a company which wants to approximate a "sound" procedure on payment, there should be a selection in conference of certain of the relevant factors enumerated earlier in the chapter, and a clear, common understanding of effective fiscal policies.

There is a further body of facts, not yet mentioned, which the wage rate committee will also be mindful of. We refer to what we shall speak of as *job ratios*; or statements in attempt to fix the relative skill required, difficulty, disagreeableness, hazard, etc., of different jobs. Such a comparative estimate is only possible with the facts at hand about all jobs in a plant or trade. And it will be well for the committee on job analysis in turning over its extensive data on all the jobs, to accompany it with recommendations as to job ratios. On a basis of these recommendations, plus its own judgment in the matter, the wage committee can then proceed to set the rates.

We are advocating a separation of decisions about work from decisions about pay—even though, as is possible, the two committees are composed of practically the same personnel. A difference in function is recognized; and this difference is destined to give rise in time to a much more healthy attitude toward work than now prevails. If we can get work honestly considered by itself first, and then pay considered in relation to it,

there will be an incalculable gain. The tendency to soldier on the job when only pay is defined, can under the right conditions give way to a condition where both sides, knowing quite accurately how much work can safely be done from every point of view, agree in advance on the pay which is fair for that amount of work.

We are, moreover, where several grades of competency at a single job are adopted, adding a legitimate financial incentive to the various equally legitimate, non-financial incentives already considered in Chapter XV. But we are adding them in a way which protects the basic interests of both sides at every point. The danger of rate-cutting, of overspeeding and strain, is largely removed where conference on work amounts exists. And the one serious danger which remains must be frankly faced and shouldered by both sides together—the danger of unemployment, due to increased output per worker or as a consequence of changes in production process. There is no use ignoring this contingency. As long as the man who is thrown out of work by any such cause is in danger of having to walk the streets looking for employment, the individual worker and the organized workers have a real grievance against the industry and against society. Some adequate and honorable method of compensating any thus involuntarily made idle, is a necessary condition of a humane industrial system.

We return now to the conference on wages at a specific job. If we assume that the agreement on grades involves only the journeyman's and apprentice's rates at a given job, the task of agreeing on the two rates is fairly simple. If there are to be four grades, the task of the wage committee is (assuming the conditions used in the illustration in Chapter XIX) to fix weekly wage rates for Grades A, B, C, and D¹. This fixation will, as we have already said, take place in relation to an agreed number of factors including the job ratios. The smallest number of factors which it would seem to us could ever be used with safety, we embody below in a summary statement of principles of wage determination. And any company, we are convinced, can profitably apply this body of principles as soon as it cares to:

The company which desires to proceed to greater lengths in

¹ A "grade" as discussed in Chapter XIX, is a standard of working proficiency at a job jointly determined upon in terms of quantity, quality, etc.

solving the payment problem can then follow not alone the principles set forth in this chapter but also those considered in the next.

Certain Principles to Govern Wage Determinations.—The pay for the lowest grade at any job (*e.g.*, Grade C or D in our illustration) should be set at a comfort-minimum standard of living.

The pay for all jobs and all grades should be decided by conference in which the workers are represented equally with the management.

The pay should be based on the cost of living; on the quantity of work done; its quality where possible and other variable costs over which the worker has control.

The pay should at least equal that paid for work requiring comparable skill in the same locality; and it should at least equal the pay at similar work elsewhere in the same industry.

The pay for the adult man should be fixed on the assumption of his having to support a wife and three children under twelve (statistically considered to be "the average family"). The problem of women's wages we consider separately at the end of the chapter.

The management should aim more and more to inform the workers of the financial policies of the company. The time will come in a period of depression or of a dull market when employees' confidence in facts about the relation of finances to production may be eagerly sought in vain, if it has not been sought when times are better.

Definition of a Fair Wage.—We draw from these principles and from our study of the payment problem a definition of a fair wage which we hope will have clarifying value. The definition makes no attempt to do the impossible. We see no possibility of such a thing as an "absolutely fair wage." Indeed the beginning of wisdom regarding the payment problem is to realize that *there are no absolutes to fall back upon.* "A fair day's pay," "a just wage," "equitable distribution"—*these are all relative terms.* They always have been; they always must be. They mean one thing to one group; something else to another group. They mean one thing today and another tomorrow.

Once managers realize that there are no absolutes in the solution of the payment problem, three-fourths of the uneasiness and petulance about wage adjustments will automatically disappear;

for it will be realized that each wage problem has to be faced afresh and discussed coolly in the light of the most urgent contemporary facts and forces.

A fair wage is one which, in relation to the work agreed upon, under existing circumstances, with the then available facts and taking account of all active factors, the interested parties agree to be reasonable, possible and expedient.

The corporation which accepts this definition of a fair wage and acts upon the few principles just set forth, as many already have, will find itself facing a situation of greater stability and confidence in wage relationships than is otherwise obtainable.¹ Employers may not always agree that a necessary course of action is the wisest; but they will have under this plan what is today a genuine advantage, a knowledge that whatever happens, happens with both sides staring in the face as many of the facts as they are jointly prepared to consider.

The Conference Committees.—One further word is necessary about the organization of the committees on job analysis and wages.

There are certain general matters which concern the work of the shop as a whole and the pay of the shop as a whole which will require determination prior to the consideration of individual jobs. The number of hours of work per day and week, for example, and the minimum rate of pay for the shop, are matters affecting all workers. Such items may be discussed and acted upon in the central shop or works committee. This procedure will not have great draw-backs if in making decisions the group is in possession of the necessary facts which we have enumerated. But usually in the larger plants, the advantage of at once delegating the special problems relating to work and pay to the respective standing committees on those subjects, will be substantial, since these groups can then become expert on their subjects.

We propose, therefore, that there be a job analysis committee at large and a wage committee at large, each composed of an equal number of representatives of management and men. The employee members of this committee should be selected in whatever way is thought to be most fair; but if a central shop committee exists it can usually pick these committees with satis-

¹ For interesting testimony regarding the success of the conference method see WOLFE, A. B., *Works Committees and Joint Industrial Councils*, pp. 73-4.

faction to all. The job analysis committees at large would thus be constituted as follows:

Representative of production management
 Representative of personnel management
 Representative of foremen
 Three representatives of workers at large

And similarly for problems of pay at large a committee would be constituted as follows:

Representative of finance management
 Representative of personnel management
 Representative of foremen
 Three representatives of workers at large

When it then came to consideration of the separate jobs, the only members of these committees who would need to retire *pro tem.* would be two representatives of the workers at large, whose places would be taken by two representatives from the job under discussion.

We suggest these details not in order to urge the working out of this general approach in any hard and fast, rigid system, or by any fixed hierarchy of elaborate committees. We have no system. We are only urging a few simple principles which, by way of illustration, it is only fair for us to picture as concretely as is possible in a general presentation. We not only realize but insist that *it will remain for every plant to embody the idea of consultation and agreement upon pay on a basis of a previous definition of work, in a way adapted to its special conditions.*

These suggestions are, moreover, in no way opposed to any methods implicit in bargaining with labor unions. If one shop has a collective bargain with the unions, it will be easy and desirable to have the conferences with the union be, in effect, work conferences and then pay conferences. And in these cases the lowest grade at any job *would receive the agreed union scale for journeymen; and the other grades, A and B, would get amounts above that, either as agreed to with the unions or with the shop workers alone.*

If it is objected that the unions are not prepared to bargain in this way on work and on pay differentials, the answer is that in some cases this is true. But the cases are also few where employers have gone to the unions, and asked for conferences on

work amounts and pay differentials, *on a basis of their own reciprocal promise* not to cut rates, to have joint agreement on job study and job grades, to have all differentials *above* the minimum cost of living, and to institute unemployment insurance, an annual wage or some other form of protection from insecurity of employment. And without such a basis, it is not to be expected, or even from a human point of view greatly to be desired, that the unions should proceed to great lengths on the principles here outlined.

Nevertheless, nothing can alter the fact that conditions which assure productivity and interest are those, broadly speaking, of differential pay, of security of livelihood, of joint study for improved process, of joint agreement upon the division of the income, coupled with the use of the non-financial incentives already discussed.¹ If the ends are desirable, then the best means to them are worthy of serious consideration. And it remains for the employers, the community, the unions and the employees to agree upon the applications of those methods which it is now widely conceded will alone accomplish the desired results.

¹ "The report of the Committee on Organized Public Service in the British Building Industry found four main factors (1919) tending to restrict output:

(a) The fear of unemployment—which naturally inclines the operative to make his work last as long as possible.

(b) Disinclination to make unrestricted profit for private employers.

(c) Lack of interest owing to non-participation in the control of the industry.

(d) Inefficiency; both managerial and operative."

SPARKES, MALCOLM, in *The World Tomorrow*, v. 2, No. 12, p. 321, December, 1919.

Selected References

(See end of following chapter.)

CHAPTER XXIV

PAYMENT PLANS AND METHODS

Companies which have shop committees or agreements with labor organizations have already at hand the representative machinery through which payment problems can be taken up. And it is good business to perfect this machinery and even to introduce it where it does not exist.

But more and more employers and workers are not satisfied to consider the problem solved when wage rates have been established. They desire to extend in some way the division of the returns from the business to the profits. The motives for the introduction of profit sharing are numerous and usually mixed. It is, therefore, particularly important to distinguish at the start between those proposals which are snatched upon by the manager as something of a panacea, and those more carefully considered plans which look toward a genuinely widened basis of control.

The manager who wants quick results will usually find that profit sharing is the last thing he should consider.¹ Excellent critical studies exist of the values and limits of value of various profit sharing projects. And no firm should embark on such a project without giving these the most careful reading.² For the road of profit sharing is strewn with the wrecks of sanguine beginnings and abandoned hopes.

It may, indeed, be truthfully said that there is almost no end which profit sharing contemplates which a management cannot

¹ We heartily agree with the following conclusions: "Profit sharing is not a problem to consider first. It is the problem to consider last . . . (it) will not destroy trouble; it may postpone, alleviate or hush it temporarily, but it will not overcome it, nor will stock sharing, yearly wage dividends, nor memberships in thrift societies. In fact, these very good plans may aggravate the employees. The warning is first to put your house in order. The first element of your labor problem is to get your basic system of pay right. Profit sharing is not a basic pay system." P. L. BURKHARD in *Industrial Management*, July 1919, v. 58, pp. 42-5.

² See BURRITT, A. W., and others. *Profit Sharing: Its Principles and Practice*. N. Y., Harper & Bros., 1918. Also, EMMET, BORIS, *Profit Sharing in the United States*, United States Bureau of Labor Statistics *Bul.* 208.

better gain in some other way. There is but one exception to this statement; that is, the firm which has sincerely in view the end of making its workers partners in the control and results of the business—the firm which does actually want to divide its profits.

We would emphasize, however, that we are not necessarily *advocating* that any one plant proceed to great lengths in the division of its profits. Fundamentally the profits of one plant are of less significance to the community and to the workers than the profits of an industry as a whole.¹ Moreover, we see considerable force in the position of those employers who recently declared: "We cannot believe that either the proprietors or the workers are entitled to the whole of the surplus profits of the business, though they might reasonably ask for such a share as would give them an interest in its financial prosperity . . . We believe that in equity the community may claim the greater part of surplus profits . . .,"²

But the fact remains that individual plants desire to act, and are acting, in the direction of profit sharing. And believing that there are better and worse ways of developing such a policy, we shall proceed to lay down what seem to us to be the socially expedient principles to govern this development.

But caution must be observed in taking the initial steps. *The place where control should begin and where results should show, so far as the manual worker is concerned, is first at his own job.* It does no particular good suddenly to elevate workers to boards of directors; or suddenly to divide up profits so that a worker finds himself with a couple of hundred extra dollars to spend each year. The place to commence making the workers actual partners is at that point where the workers now are. In other words, the corporation which is honestly seeking to do a service to its workers and to society by a division of profits, ought to start in that direction *by providing a structure of representative control over certain of the matters which help to create the profits.*

At the risk of seeming dogmatic we reiterate that the best way to start where the workers are, and where determining influences are at work, is to start with job analysis under joint control.

¹ See in this connection Shop Committees by ORDWAY TEAD in *The New Republic*, v. 19, pp. 241-3, June 25, 1919.

² Industrial Relations Report of the English Friends, *The Survey*, v. 41, supp., Nov. 23, 1918.

In short, a start should be made with problems surrounding the conduct and improvement of each job; and the attempt should be to build the worker's interest, the worker's knowledge, the worker's sense of responsibility and the worker's reward up from the place, the outlook and the reward which he now has. That will lead to discussion and agreement about amounts of work, and finally about pay.

In that discussion it will be perfectly natural and normal, especially if that is the company's wish, to bring up for joint consideration the fiscal and salary policies which help to determine the "wages fund" which is available; and to discuss any and all other relevant factors. In this way, employees will get a knowledge about the financial situation which will show whether the proposed profit division is merely a quixotic venture or whether it is developing out of sound beginnings.

But, it will be objected, this is not profit sharing. No. It is only the beginning of a joint control over process and over workers' earnings. And it may be objected that such control may eventually lead the workers to demand higher wages which might begin to encroach upon profits. This is not only conceivable under the conditions, but likely. Yet it should be remembered that the management, under the terms of our discussion, has decided that it wants sincerely to share profits. And if the necessary safeguards are thrown about the procedure of joint conference and wage increase, it should logically have no objection to its income going in higher drawing accounts than in profit distribution. These safeguards should be substantial and they should be kept always to the fore. For example, the fullest possible knowledge about financial affairs must be available as affording a basis for intelligent action. The relation of profits to credits, to extensions of plant, to excess profit taxes, to wise advance purchases of raw materials—should all be known and patiently set forth. Admittedly it would be only under such conditions that a real broadening of the basis of control could wisely take place.

This proposal thus differentiates itself sharply from the usual profit sharing plan in which the company is merely a *cessionnaire*, bountifully granting out of its super-abundance some cash benefits to the employees. Such gratuities are, of course, neither fundamental, of special benefit to either side, nor of any help in solving the payment problem.

What is needed is an arrangement which develops and uses as fast as it does develop, the interest of each worker in the productivity of the enterprise. If joint action commences on problems of work and of pay, it can and will if desired grow into joint action on larger issues. In this way, as in no other, the worker's relation to production becomes closer and closer; his knowledge constantly increases to match his increasing responsibility; his opportunity to exercise control and responsibility increases exactly as fast as his desire (and usually faster). He becomes in actual fact a sharer in the enterprise. And if *under these conditions* he seeks to increase his weekly drawing account, that would seem to be a highly desirable step.

There would still of course be real danger that workers would increase drawing accounts at the expense of reserves and surpluses necessary for profitless periods and extensions. We have no desire to minimize this danger. But it must be remembered that under the conditions we are assuming the employees *know* that bad years do occur, and that money borrowed of banks costs more than funds drawn from accumulated surplus. It is inherent in the educational value of joint conference that workers come to all this knowledge; and their own native shrewdness is to be counted on quite as much as anyone's.

But if the business is a prosperous one when this point of a determination of reasonable drawing accounts has been successfully passed, there will still be a residuum—an ultimate surplus—after the several fixed charges are met. And the company which then desires *on some mutually satisfactory basis, to divide up this residuum*, will be advancing to what seems to us to be *as nearly as it can be under existing arrangements*, a "sound" procedure of division.

But it is necessary to be clear as to how this residuum is reached. For brevity's sake let us, therefore, state categorically our conclusions as to the principles underlying this proposal. The methods of determining the residuum will become clear from this statement.

Certain Principles of "Sound" Profit Division.—It is a necessary prerequisite that there be a joint definition of amounts of work and of related amounts of pay.

These amounts of pay should be considered as drawing accounts throughout the organization.

There should be definite assurances of the continuance of the plan independently of the earnings of a particular year.

There should be joint agreement to the terms of the profit sharing; joint administration of its provisions; and joint consent to changes.

The company finances should be in a sound condition; that is:

(a) There should exist an agreed relation between stock values and physical values.

(b) Too much money should not be tied up in raw stock or in goods in warehouse.

(c) Short time paper, if needed, should be bought at bottom prices. If the company could finance current transactions cheaper by the maintenance of a reasonable amount of surplus, such surplus and such use should be eventually provided for.

(d) Plant should be kept in first class shape as part of current expense. This would apply to the purchase of equipment for renewals, thus making a negligible depreciation charge possible.

There should be agreement upon a limited dividend. This should be high enough to compensate stock-holders so that they will have no further claim on profits.¹

There should be agreement as to amounts to be set aside to finance extensions, to create surplus, to create a sinking fund to be used to pay drawing accounts, unemployment benefits and minimum dividends in poor years. The frequently met objection that profit sharing is not fundamental unless there is also loss sharing is beside the point *if the management starts the plan in order to divide profits*. The management is not in any case asking the employees to assume the financial risk; that is definitely the capitalist's function under the present system. There is good reason to believe, however, that careful financing of most corporations in good years would make it possible to lay by sufficient funds to help appreciably in sustaining the *active agents* in the business during poor years.

There should be agreement as to a minimum wage, as to the maximum salary and as to salaries for various grades of executives. There should be annual accounting of the company's finances by an agreed accountant and access to the books by an accredited representative of the workers.

Any residuum—ultimate surplus—left after meeting all the

¹ In the Zeiss Optical Works it is provided that there is a premium to invested capital in payment for the risk, corresponding in amount to the average loss of capital in the industry as a whole over some prescribed period.

above charges in the manner specified, would then be divided among the *active agents* in the business; either on a basis previously agreed to, or on some basis to be determined afresh each year in the light of the circumstances under which the profits are earned.¹

All this will no doubt seem a large order. And such it is. We do not set it forth here by way of immediate advocacy for every firm. There will be few firms so organized or so disposed, that they can in the near future go far in the direction of these principles. But there are some; and there will be more. And there are many others which think they want to share profits. If this discussion will help to clarify their thinking and supply a reasonably wholesome objective, its inclusion here will be amply justified—no matter how utopian it may appear to the managers of the majority of companies.

Stock Purchase Plans.—There has lately been much advocacy of the use of stock purchase by employees as a method of gradually extending to them a measure of control over the enterprise, and at the same time increasing their income. The argument runs, of course, that by slowly accumulating the stock of the corporation the workers come naturally and legally to the right to vote for the board of directors and perhaps even to elect one of their own number to the board.

Moreover, it is claimed that the ownership of stock gives a sense of part ownership in the business which is a real spur to initiative and effort; that having such a sense of ownership the workers feel securely established in their jobs and become beneficiaries of the profits automatically in their own right and by their own savings. They become property-holders and hence develop the desire for "law and order" which material possessions bring.

One trouble with this proposal is that the workers do not usually see the value of stock purchase in quite the above light. In the first place the time factor is a consideration—especially if workers are desirous of getting more adequate representation

¹ Attention is called to the fact that this general proposal could be applied to an industry, no less than to a factory. Moreover it is not inconsistent with a policy which requires a return to consumers of a proportion of profits.

The most far-reaching and scientific proposal made in this direction is contained in the Interim Report of the Committee on Scientific Management and Reduction of Costs, reprinted in the Industrial Council for the Building Industry, published by Harrison and Sons, London, 1919.

than they now have. For them to purchase enough shares to have any real influence in the directorate would usually require several decades. But even if this were more quickly possible, a doubt arises as to whether, for immediate purposes, representation on the directorate would bring the results desired by the management as quickly as some other method—say, collective bargaining.

There is also in the workers' minds the fear of becoming too firmly rooted at a job. The workers' power in bargaining, under present conditions, comes in a measure from a certain degree of mobility. If a firm proves obdurate to their demands and a strike fails, they want to be able to look elsewhere for work without too much effort in the way of selling shares or even homes.

Because of this attitude, there is good reason under any such plan, for a provision making it possible for the employee on reasonable notice and without elaborate red tape to sell his shares back to the company. Various contingencies may arise which make it necessary for the worker (who lives anyway on a narrow margin between income and expenses) to make use of his accumulations. If, as is the tendency under a stock purchase plan, most of his savings are in stocks, they are likely to be too inaccessible for immediate conversion into cash to be convenient or safe for him.

There is, also, the danger of having all of one's eggs in one basket. In a well organized corporation making a staple commodity, there may be little or no speculative risk. But for the ordinary worker to have all his savings in industrial stock is certainly not a dictate of discretion. There is the further difficulty that, due to causes quite beyond the control of the factory, stock values may fall below the price paid by the worker. It will be said that this is a risk which every investor must take; but our point is that the worker is not, and should not be expected to be, in a position to undertake this risk.

No one can afford to take a risk who has not a margin above the actual costs of subsistence. Not only is the worker's margin narrow or even non-existent, but he has the personal risks of sickness, unemployment, old age and death to provide against first. Moreover, where the stock purchase is taking place on an installment payment basis, the employee who leaves has his paid-in balance to recover, on which, of course, he has not been receiving interest unless the title to the stock becomes his at the first payment.

On the whole, therefore, stock purchase schemes do not appear to offer any satisfactory way out of present difficulties. Indeed, we can generalize more widely and say that no plan which confines its organization and control to a single plant or group of plants in an industry, is really more than a temporary step toward an inclusive representative organization of an industry as a whole. Some of the factors which go far to determine profit lie almost altogether outside the control of the individual factory; so that until there is created an organization competent to deal in a firm way with the major economic influences at work throughout an industry, no rock-bottom attack has been made. This is not said to deny the necessity for intra-plant shop representation in one or another of its forms, or to minimize the value of plans to encourage thrift. We are only urging that any ultimate determination of a company's financial affairs requires also extra-plant associations on the side of both managers and workers.

Payment Procedure.—There are a number of details about the procedure of "paying off" to which attention should be called, since this procedure can occasion a good deal of petty irritation unless it is wisely handled. We state below what experience has usually shown to be the best practice on these matters.

It is desirable to pay off on company time.

It is desirable to pay off as rapidly as possible. This may be accomplished in various ways; as, *e.g.*, by having different pay days for different departments, or by taking the pay envelopes directly to each department.

It is desirable to pay up to as near the day of payment as book-keeping arrangements permit. It should usually be possible to pay, for example, on Saturday up to the previous Wednesday. The practice of withholding a full week's pay is unnecessarily rigorous. Some states have laws governing the amount of pay which may be withheld, and the frequency of payment. Usually a weekly settlement is to be preferred.

It is essential to provide a place and person to whom the workers can go to secure adjustments in pay errors. We have seen foreign workers come to the grated pay window to get a payment trouble straightened out, and receive the most brusque, abrupt and inconsiderate treatment at the hands of a young clerk. This sort of occurrence is unnecessary; yet it contributes not a little to a natural feeling of resentment on the part of every self-

respecting worker. It must be remembered that pay errors are often the company's mistakes; but whether they are or not, they may occasion annoyance out of all proportion to their seriousness. Hence the importance of an *attitude of courteous, quick and willing attention* on the part of the pay adjuster. Indeed in large corporations these mistakes and misunderstandings become so numerous with the similarity and confusion of foreign names and with foreign workers coming and going, that the pay adjuster should either have some facility in the necessary foreign languages or have access to sympathetic interpreters.

There should also be a well understood procedure as to paying off those who are absent on pay day. Regular hours of the pay adjuster's time should be available for this necessary service throughout the week.

It is now necessary to keep a record of workers' yearly earnings for income tax purposes. This information is also valuable as indicating the total earnings of workers—figures which have more real significance than hourly or weekly rates. For this reason we urgently recommend posting wage totals quarterly on the employees' record card which contains the other facts about his history, progress, etc. In this way the employment administrator can readily tell amounts of yearly income.

If the company pays by check, it is desirable to provide a place where these checks can be cashed. On the whole it is better to pay in cash.

It is desirable to withhold no money from the pay envelope for fines, dues, loans, savings, grocery bills at company stores, rentals in company houses, etc. This may seem a comparatively trivial point; yet it has real psychological importance. The worker ought to know where his earnings go; and there is no way he can know certainly unless he makes all payments in cash himself. Often this may involve drawing money out at one window and paying it in at another. That makes no difference; *the important thing is for the worker to handle all his own financial affairs.*¹

It is desirable to have provisions for advancing a few days' wages to new employees who are at the end of their resources when they are taken on. Not a few workers, especially those of

¹ There may be an exception to this statement in the case of the collection of union dues under a definite provision in the collective agreement.

the more itinerant type, will leave after a couple of days in order to get cash enough in hand to keep them going. If an advance on wages were given, their stay would be more permanent. Some companies have arrangements with boarding houses to accommodate such new workers on the company's credit for the first week.

It is desirable to pay off discharged employees as promptly as possible. Frequently this cannot be arranged for on the day of discharge, but it can be arranged for on the following day. It is unduly arbitrary and usually very inconvenient to the discharged worker to have his payment delayed until the next pay day.

It is important to protect employees against loan sharks and assignments of wages. The company, or preferably the employees' association, should have a loan fund, and upon receipt of notice of wage assignment see the assignor, make an immediate adjustment (on the threat, if necessary, of legal proceedings if a settlement is not made) and make arrangements with the employee to carry the obligation in some other way.

It is important to have a definite policy about payment for absences when they are due to sickness, and for vacations. It is customary on both items to have one policy for the office force and another for the factory force. We see, however, no reason for not adhering to a single standard for payment—a standard approximating the present usual practice with office employees; namely, a payment during sickness (or accident) of a few day's duration after which provision is made for compensation out of a benefit or compensation fund; and payment for a two week's vacation for every employee who has been with the company one year. From the point of view of good hygiene and mutual goodwill, the provision of an annual vacation with pay promises to pay for itself many times over.¹

Policies about overtime, Sunday and holiday pay should also be clearly established. Since the usually accredited theory has

¹ "One of the innovations which the plan provides is an annual vacation, with pay, to all employees who join the society. In most companies this advantage is given only to the office employees and the heads of departments. The free vacation is favored by the Chain company officials as a part of the insurance against ill health and as a positive step to build up good health and assure uninterrupted employment. A vacation bureau will be conducted in this connection, to assist and guide employees in their choice of ways and means, and when and where to spend their vacations." *Boston Transcript*, July 25, 1919.

been to pay for extra work in a way that will induce employers to keep it at a minimum, we favor adherence to the standard now fairly well established where organized labor is recognized. This standard calls for time-and-a-half pay for overtime work, and usually double pay for Sunday and holiday work.

The practices regarding differentials in pay for night work vary from payment of a bonus of a certain per cent. of the day rate, to no differential at all.

Women's Wages.—The United States Government during the war, and organized labor for some time past, have favored the principle of "equal pay for equal work." Definition of the principle and its precise application are, however, a difficult matter.

It is, therefore, useful to examine this idea and see what it may mean. "Equal pay" may mean equal piece rates, in which case, if women's hours are legally shorter than men's, they earn less. It may mean equal hourly rates, in which case, if their hours are less, they also earn less. It may mean equal weekly wages or monthly salaries, that is, equal income.

But several different conditions have grown up as to women's pay. There are jobs, like cotton weaving, where men and women are employed interchangeably. In these cases, whether a piece rate system or a flat weekly rate obtains, it is usually felt that a condition of equality exists.

There are other jobs which have customarily been done by women. Certain work in box and candy factories, garment shops, telephone exchanges, etc., has always been done by women and paid for at a rate that no man would think of working for. It is for the aid of women in trades of this sort that minimum wage legislation is designed. And it can be fairly said that the concept of equal pay has never been applied in these cases. The assumption here is that the adult woman is single and without dependents, and the pay, even when fixed under minimum wage laws, is fixed accordingly.

Finally, there is the work formerly done by men for which women are now employed. During the war this substitution had its legitimate purpose. During peace times such substitution is likely to mean that the employer has discovered that he can get women more cheaply than men. For in the great majority of cases (and this was true during the war despite the government's declared policy) women when taken on for such work as operating elevators, feeding and operating machines, inspec-

tion work and hotel dining room service, are paid less per hour than the men whose places they have taken.

It is always said, of course, that the women do not do the same work; that modifications have to be made on the job to make it possible to use them. Yet if, for example, a woman only feeds a machine, whereas the man at the job used also to bring and remove his materials, the important fact to determine is unit costs under the two different methods. The woman who only feeds the machine may (and probably does) turn out many more units of output, and the wage of a male helper or trucker who supplies not only her but a number of other women with material is likely to be much more than compensated for by the total increase of output. But, admittedly, there will be cases where the women's work is not the same; and determination of pay will in these cases have to be made accordingly.

It seems to us, therefore, that if interpreted according to the spirit and not the letter, equal pay for equal work means *that the fact that women are doing the work is not to alter in any way the basis on which pay shall be determined, and that basis, as set forth above, is that the adult worker should receive at least enough to support him or herself and several dependents at a "comfort minimum" standard.*

In this definition several things are to be noted. First, we are assuming that *adult women have dependents*. Recent studies indicate this to be true of a majority of women over 24 or 25 years old. Second, we would call attention to the word "adult." The wage problem is, of course, altered for both boys and girls until their twenty-first year. Wages for the worker up to that age can safely be set on the assumption that the worker is a single person with no dependents.

Finally, we give this definition not so much by way of advocacy of equal pay for equal work as in order that the real implications of the idea may be grasped. All we have done is to state honestly what a reasonable construction of the phrase seems to be. The question eventually arises, therefore, if this is what equal pay means, does society want it?

Think what it would mean in a cotton mill to apply this definition strictly. The wages of women spinners and beam tenders would in many cases have to be doubled to give a wage adequate for the support of an adult and his dependents. This illustration calls attention to one condition frequently met in textile centers

which affects men's and women's pay alike and has profound social consequences. We refer to the theory of the "family wage"—a theory which says that if the total of the pooled earnings of all members of the family is sufficient to meet the family budget, a fair wage is being paid.

It may be that society will soon be prepared to make the fateful decision that *all* pay shall be on a basis of *individual* self-support, that all shall do work for which they will be paid in cash, and that those who desire family life may secure it by pooling the earnings of those individuals who are to compose the family group. Society does not yet seem to have made that decision, however; and in textile centers where the family wage idea persists, the community is really allowing the employer to force industrial self-support upon every adult individual in the working class.

One of the consequences of this extension of industrial work enforced by economic pressure is seen in the figures of infant mortality of a city like Manchester, N.H., where many women are at work.¹

But, apart from this complication of the family wage idea, the question must still be seriously put as to whether society wants to face the condition of the complete economic independence of women which an honest interpretation of "equal pay" entails.

One benefit accruing from the full application of this idea can be pointed to. If industry must pay men and women alike at any and all jobs, if from the point of view of wage rates it is a matter of indifference which is chosen; *then that sex will be chosen for the work which, all things considered, does it best.*

There would, in other words, under equal pay be a division of labor along functional lines. Those jobs which men could do best, they would be selected for; the jobs which women could do best, they would be selected for. If the results were the same

¹ "In Manchester, New Hampshire, where there is a great demand for women workers in the textile trades, 679 mothers (of those studied) were employed during the year following the baby's birth; 885 were not employed. While the (mortality) rate for the babies of mothers who were able to give their time to the care of their household was 122, that for babies whose mothers were employed outside the house was 372.9, and that for mothers gainfully employed in the home—taking in washing, keeping lodgers, etc.—was 136." From CLEVELAND, F. A. and SCHAFER, J. *Democracy in Reconstruction*. See also the original figures in Children's Bureau Publications, No. 20, Washington, 1917.

in both cases, both sexes would be employed. And there is much to be said for such a more or less automatic adjustment,—provided it is attended simultaneously by scientific studies to discover the effect of different kinds of work on workers of both sexes.

If it be objected that under such a logical fulfillment of the equal pay condition, women might find themselves less sought for at certain work, the answer is that this would be true to a degree of both sexes. And to the extent that women were thus automatically shut off from occupations really harmful to them, the social gain would be great. As it stands today there is real danger where women can be employed much more cheaply than men, that those who are to be the mothers of the next generation will be in no fit condition to exercise that indispensable function. Yet if a woman's individual income is increased so that it equals a man's, will not the temptation to forego motherhood altogether be a grave one?

It may be thought that we have thus reached no conclusion as to desirable practices regarding women's wages. But we do not forget that women's pay like men's is properly subject for consideration in the wage rate committee after study by the job analysis committee. Our attempt above has simply been to present the concept of "equal pay" in its various aspects and implications. It will be necessary for each wage rate committee (and for each minimum wage board in our states) to decide how literally they choose to adopt equal pay and take the consequences of really equal income for the adult man and woman worker of equal competence.

Foremen's Salaries.—Efforts to determine foremen's salaries give rise to certain further practical questions. First, shall the foreman get more income than the most highly paid piece worker in the department? No categorical answer to this is possible; but our own position is that the foreman should be one (or if he is not, he should be educated so that he is one) whose value to the company as an executive, as a leader and dynamic force in his department, is large enough to warrant paying him well above the amounts earned by any of those under him. A prominent executive of the International Harvester Company said recently that his company was attempting to develop a group of foremen whom it would be justified in paying \$5000 a year.

Corporations are likely to demur at paying foremen well, both

because they fail to see the importance of the position and because they do not recognize that ability for foremanship is a different and more rare genius than ability for manual work. Once the thought that foremen are executives gains currency, the question of paying them more than the best paid workers is likely to be less frequently raised.

Suppose, again, a foreman who is not a skilled mechanic, has many highly skilled and highly paid men under him, but is himself a good executive; should he then be paid more than his best worker? It would seem to us that the arguments that apply above, apply here also with equal force.

In some cases foremen are paid a bonus if the production of their department exceeds a certain figure, or if unit costs are kept below a certain amount. Such devices may in some cases be necessary to create in the foreman a willingness to do his job properly; on the other hand they have sometimes proved too great an incentive to an unwholesome driving and speeding of the workers in his department. In our experience a bonus to anyone for doing something which under right conditions he should do anyway is a poor second-best procedure. The first thing to do is to pay an adequate salary and pursue a program of foremen's education, which will insure that the foreman, or anyone else, knows his duties and is interested to carry them out.

There is perhaps more to be said for profit sharing with foremen; and for sale of stock to them. In both of these ways the foremen are recognized definitely in the final results of the year's business, and this is as it should be.

But on the whole, we favor the use with foremen also of a procedure of definition of work in joint conference with a subsequent determination of pay in relation to work, along lines analogous to those in use with manual workers. In fact, we see good reasons for applying this idea also throughout the lower ranks of office and executive workers.

There would, in short, be selected out of the foremen's council delegates to a joint job analysis committee for foremen; and there would also be an equally representative committee of management and foremen on foremen's wages. Thus the idea of the drawing account would apply to them; and they would, where a profit division was instituted, be a party to the distribution of the surplus by means of representation in the financial conference which decided upon this final disbursement.

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CHAPTER XXV

MEETING THE INDUSTRIAL RISKS

Accidents, occupational diseases and unemployment are risks more directly incident to industrial work than general sickness, old age and death. But all are contingencies which everyone in industry faces and all stand as big causes of anxiety and dread in the working class family unless some previous provision has been made.

These social risks are peculiarly the cause of fear and worry when wages are near the margin of subsistence. And until the prevalence of this fear and its effects are clearly understood, managers will not realize the importance of making some systematic provision to offset it.

Fear is an emotion whose effect upon the organism is depressive, repressive, paralyzing. It gives rise to a state of mind and body which is unwholesome and abnormal. It checks in the individual impulses and responses toward creative work, and positive cooperation. Fear induces a mental outlook which when it becomes prevalent in a group literally makes impossible the release of the best social qualities; it fosters hate and thus becomes the parent of the anti-social tendencies and emotions.

There are, in other words, the best of psychological as well as of economic reasons for making provisions in working class life which will meet the inevitable social risks.

The Method of Insurance.—Society today uses the ingenious device of insurance to distribute its familiar risks in such a way that all can help to bear them and all be helped when they are in need. And the major problem in respect to the industrial risks is to make use of a form of insurance which gives the best protection. Specifically this raises questions as to the size of the group which should undertake the insurance, the basis of selecting the risks, the amounts of premiums and benefits, the degree of compulsion to be exercised within the group, the basis of sharing the premium payments. These and all the actuarial problems entailed are in part technical questions which it is beyond the scope of this volume to settle. But it will be useful to state

certain general points which should be considered in relation to all insurance plans, to consider briefly the different kinds of risks which must be met and state the kinds of problems to which the introduction and administration of each gives rise.

Principles Having General Application.—Up to a certain point the larger the groups over which the burden of risk can be distributed, the smaller will be the charge upon every participant, assuming the charge is based upon actuarial principles.

Since actuarial advice is usually essential if a plan is to be soundly framed, it will pay to consult a good independent consulting actuary after the plan has been roughly sketched out, and get all possible help in creating a plan that will not be bankrupted by the first epidemic which follows.

Insurance plans of all sorts should be as simple as possible in respect to methods of paying premiums, securing benefits and complying with all the conditions under which the worker becomes eligible. And payments of benefits should be promptly made without the necessity for the intervention of any third party.

The insurance is most effective if all members of an exposed group are participants. Where the participation is compulsory, however, there should be provision either for immediate refund of his deposited principal with interest to the worker who leaves, or for transfer of the insurance to his account in his new employment.

Administration of the actual disbursement of insurance benefits should rest as far as possible in the hands of those who are in sufficiently close touch with the affected workers to know definitely when he should be a beneficiary of the fund.

Accident Insurance.—Forty-two states, including practically all the industrial states, have workmen's compensation laws.¹ But the procedure under these several laws varies widely in respect to all the important features. And it holds true of compensation insurance laws as of most other legal labor standards, that they represent minimum and not the maximum desirable requirements.

The humanly desirable standards over and above the legal requirements which any plant may well adopt are: No waiting period if the disability extends over one week; payment of at

¹ See HOOKSTADT, CARL. *Monthly Labor Review*. U. S. Dept. of Labor, January, 1920, pp. 230-247.

least 75 per cent. or 80 per cent. of wages if not all wages during period of actual recovery; provision of adequate free medical attention; recognition that since diseases contracted because of occupational hazards are of the same character as accidents, compensation for such diseases shall be on the same basis as accidents.

Another feature of compensation plans that the employer can often usefully help to supplement is the actual payment of benefits. Where long delays in the decision and settlement occur, there may result real hardship in the family of the injured worker; and in anxiety he may even resort, unnecessarily, to a lawyer to help his case along. Managers should accept the responsibility of making clear to the workers that lawyers are not usually necessary; and of advancing funds against the payment of the compensation by the state or insurance company.

In those states where no legal provisions for accident insurance exist, the enlightened management which sees the value of "casting out fear," will adopt voluntarily the standards of compensation of the advanced states.

Sickness Insurance.—Mutual benefit associations have constituted the first organized step taken by many firms to meet the incidence of sickness upon their employees. A great variety of methods exist among the several hundred of these associations, but there are outstanding features of the movement which can be summarily considered.

There is wide agreement that membership in benefit associations should be voluntary. This means, however, that much thought must be given to advertising the plan and enlisting memberships.

Associations should be administered cooperatively. "A joint management secures the counsel of the officers of the corporation and the interest, enthusiasm and experience of the employees; thus the organization is operated for the best interests and secures the greatest enthusiasm of all concerned."¹

The expenses of benefit associations appear to be satisfactorily handled when the employees' premiums are high enough to meet the actual benefits paid; and when the company pays whatever

¹ CHANDLER, W. L. Conclusions From a Survey of Over 500 Employees' Benefit Associations. U. S. *Bulletin of Labor*, No. 227, pp. 158-167. An invaluable study for any corporation which contemplates the adoption of a sickness benefit plan.

administration overhead is necessary with perhaps bonuses to members for increasing the enrollment in the society. Fundamentally, however, it seems to us that the principle of joint contribution is sounder, especially since the conditions of employment, which the corporation provides, influence the sickness rate in a most definite way.

The method of regular weekly dues of a fixed amount is generally recognized as sound and Mr. Chandler finds that with dues of ten cents per week the fund can under ordinary conditions pay each sick worker \$1 a day after the third day of sickness for a period not to exceed thirteen weeks. "If it was desired to extend these benefits as long as disability continued, it would be necessary to add only two cents per week per member."¹

For the addition of 2.5 cents a week to the premium he finds also that a death benefit of approximately \$100 can safely be paid to members dying of sickness.

These figures of the relation of cost to benefits are given, it should be understood, only by way of illustrating the relative proportion which premiums must bear to compensation. Under present conditions benefits of one dollar a day while better than nothing, are wholly inadequate to meet the needs of workers in a period of sickness. Benefits of double this amount come nearer to a desirable amount, and if, as is possible, larger benefits require a premium which the employee feels is too high for him to pay, his contribution must be supplemented. Indeed, joint contribution of employer and workers in employee benefit funds, seems from every point of view the more satisfactory arrangement.

A typical benefit plan sets forth its essential provisions in the following terms:

"Any member of this society in good standing is entitled to receive a benefit of \$1 a day—Sundays not included—during such time as they shall be incapacitated, through sickness or injuries, for performing his duties as an employee.

"Benefits to take effect on the fourth working day after sickness or injuries. Benefits not to exceed 13 weeks in a calendar year. In all cases of sickness or injuries, the secretary of the association must be notified in writing at once or claims for benefits will not be allowed.

"No member shall be entitled to benefits for any sickness or injury which shall have been caused or brought about by the use of intoxicating liquors or opiates, or by immoral conduct, and no member having a

¹ CHANDLER, W. L. *Op. cit.*, p. 164.

chronic disease or ailment previous to joining the association shall be entitled to benefits for disability therefrom.

"The president shall, on all such cases brought to the attention of the secretary, appoint a sick or visiting committee, consisting of three members, or, if a nurse is employed by the company, of four members, one of whom shall be the nurse."¹

Group Insurance.—In recent years the commercial insurance companies have been selling policies under which all employees of one corporation "are insured against loss in case of death from any cause, or disability, during the term of their employment by means of a single blanket contract issued against the employer by an insurance company."

This insurance has thus been typically a life insurance only, for which the premiums have been met by the employer, and the administration has been entirely in the hands of the insurance company and the employer. The following statement is a convenient summary of the usual characteristics of the group plan:

"The usual formula adopted by employers has been on a service basis. The employer furnishes, for illustration, a minimum amount of \$500 life insurance to employees who have completed six months of service, increasing this amount by an additional \$100 for each year of service up to a maximum of \$1,000 after five years of service, or \$1,500 after 10 years of service. In event of the employee leaving the service, insurance under the group form is discontinued, but the employee may be given the option of continuing life insurance under a regular individual policy without the necessity of passing a medical examination.

"The approximate cost of group life insurance depends upon the combined costs of the various ages of the employees. This cost, however, averages usually from \$4 to \$5 per annum for each unit of \$500 of life insurance. No medical examination is required at the start provided a satisfactory percentage of employees becomes enrolled, and no medical examination is required of new employees who come under this insurance after six months' service.

"Each employee receives a separate individual certificate stating his own protection with whatever imprint or announcement the concern desires to make in connection therewith. Under the group life insurance provision employees are also

¹ TEWKSBURY, W. J. Helping Workers to Help Themselves. *Factory*, August, 1919.

usually protected by payment of the full proceeds in the event of total and permanent disability from accident or disease incurred before reaching the age of 60.”¹

Recently, however, there have been modifications in the kind of group insurance sold. Certain policies include provisions for joint administration of the insurance by local management and men, joint contributions and the inclusion of sickness as well as death benefits. These features make the plan more a cooperative undertaking and thus remove some of the usual working class objections. It is probably still true, however, that in a company of any size the same benefits as the group policy offer can be obtained under a cooperative company fund at a somewhat less expense. But to conduct such a cooperative benefit association successfully, the company must receive competent actuarial advice in advance in order to bring the amount of required premiums into right proportion to the benefits to be offered. And this can only be done when the sickness and death rate of the plant is known and when the total amount of money available for the insurance fund is agreed upon.

Group insurance, as ordinarily administered, therefore, even though it may bring genuine benefits to the workers, fails to take account of their psychology. Its defects in this connection may be better seen by a comparison with the mutual benefit society. Speaking of the latter type of organization, Mr. Chandler after his extensive study says,

“The association is in the business of selling insurance; it must have a proposition which can be readily sold to the employees. We were able to show them some of the psychological features of the proposition, not through a definite study of psychology, but by bringing them to see the effect on prospective members of certain methods of procedure. One point that was kept forcibly in mind continuously, was this—the entire plan of reorganization must be above suspicion. There must be nothing about it which would permit the suggestion, by those of perverted mind, that the corporation had any motive other than the best interests of the employees. All decisions were to be made by the employees. We took pains to place before them, however, all of the facts, both for and against each proposition on which they were to ballot, so that they were benefited by the experience and judgment of those who had experience in insurance matters, sales promotion, and in addition, the facilities for securing information.”²

¹ RICE, E. E. Group Insurance for the Industrial Worker. *Industrial Management*, March, 1919.

² CHANDLER, W. L. *Op. cit.*, p. 161.

Public Health Insurance.—There remains to consider as a means of meeting the sickness hazards, the kind of public health insurance which has been in successful use in England since 1911, and which is now being vigorously urged in the legislatures of several of our own states.

Briefly the plan of this insurance is to require the insuring of practically all industrial workers, on a basis of contributions made weekly, 40 per cent. by the employer, 50 per cent. by the employee, and 10 per cent. by the state. The amount of the employee's contribution would probably approximate 25 cents a week.

In return for these payments, benefits of a certain per cent. of wages (probably two-thirds, with a minimum of \$5 and a maximum of perhaps \$8 a week) for twenty-six weeks, free medical and hospital service, maternity benefits and a death benefit of not more than \$100 would be provided; the administration of the benefits to be through local groups on an industrial or geographic basis.

Inasmuch as existing statistics of sickness show that each worker in this country averages in the neighborhood of nine days of sickness per year, there is indeed good reason for considering some way of compensating for sickness, which is universal and independent of the forethought of the individual corporation or its employees. And despite the objections urged against it from various points of view, it seems probable that public health insurance along lines already embodied in proposed bills will meet the immediate needs better than any other method which would have any reasonable likelihood of adoption. It will, as a minimum, do one invaluable service; it will in a dramatic way call attention to the extraordinary amount and cost of sickness which results today; and thus will lead to the more vigorous preventive measures of public, industrial and personal hygiene which the community is otherwise so slow to adopt.

Unemployment Compensation.—Application of the insurance idea to unemployment has been relatively slow in coming, primarily because of the frightful irregularity of industrial employment in the last fifty years and the consequent high cost of adequate insurance. England has a national unemployment insurance which is constructed along lines similar to its health insurance, although it is confined to selected trades. There are other types of public unemployment benefits on the continent. And a good deal has been done by the labor unions in Europe

in paying out-of-work benefits to their idle members. In this country such union provisions are confined to the members of two or three organizations.

Apart from these, any practical attempts in this country to pay workers who are unwillingly unemployed have been exceedingly rare. Much thought is being given to the matter, however, and the proposals take two forms.

They take, first, the form of an annual wage to be guaranteed by the corporation with the responsibility then on the management to provide work to keep its people busy. This proposition is receiving serious consideration in one of the industries where the tradition of collective bargaining is strong and where the unions are urging the importance of regular employment.

And, second, there is the plan, already adopted by one company, of laying aside a surplus fund out of which unemployment benefits would be paid to employees in good standing during idle weeks. The following resolution was adopted by this company in the summer of 1919:

"VOTED, that inasmuch as the basis of our Partnership Agreement is the payment to both Labor and Capital of a living wage which shall be constant, and inasmuch as our industry suffers from periodical periods of depression during which full employment is impossible and so Labor does not receive its living wage, that also during which profits shrink or losses occur so that Capital does not receive its wage, the Board of Directors set aside from the Net Earnings remaining after the payment of wages to both Capital and Labor as a Sinking Fund, 15% of such Net Earnings.

"This fund to be limited to \$250,000.

"When this sum is reached no further payment shall be made unless the sum becomes depleted when the Sinking Fund shall again go into effect.

"This fund shall be used to pay half wages to all regular employees who may suffer during such periods of depression from the closing of the plant, or any of its departments.

"VOTED, that the details of the plan under which this fund shall be administered be left to the joint action of the two Boards of Management (of the Dutchess and Rockland Branches).

"VOTED, that a similar Sinking Fund of the same percentage, limited to the same amount, shall be set aside each year as a guarantee to Capital of its minimum return (6%) during years when this shall not be earned."¹

¹Quoted from *Bleachery Life*, August 5, 1919, published by Garner Print Works & Bleachery, Wappinger Falls, N. Y.

There will undoubtedly be other plans of a similar character put into effect in the near future by those employers who see the close relation of security of livelihood to efficiency. But it should be remembered that any far-reaching attack upon the problem by such plans is out of the question. Unemployment is basically a risk created not by the employer or the workers but by the nature of our industrial organization. And the burden of this risk will only be fairly distributed when it is assumed by the whole community under a public unemployment insurance plan.¹ This was the determining consideration in the creation of a national plan in England. And sooner or later the economy of such insurance will commend itself to us here.

Meanwhile all that any one firm or industry can do to lighten the burden of involuntary idleness will be a boon to its workers and a business asset to itself.

Old Age Pensions.—The problem of old age pensions is a thorny one; it bristles with difficulties. Shall the pension be contributory or non-contributory? Who is to determine the employees' eligibility? Does a striking employee cease by that fact from employment? Does the individual employee who leaves have any moral claim upon any part of the fund?

Mr. John A. Fitch in an excellent discussion of this subject summarizes the present situation by saying that, "there is nothing new about the establishment of pension funds by employing corporations in the United States. Indeed, the development of such systems has been rapid in the last decade, and the reason is obvious enough. What to do with the superannuated employee is a question that has to be faced sooner or later by every employing concern. The presence in the workshop of men who are no longer able to do their full share of the work is demoralizing and makes for inefficiency, but what is to be done with such men? Many an employer has adopted a make-shift policy; he tries to find light work for the old employee; he creates a job for him of no particular importance or value to the shop, or—crowning indignity after years of efficient and faithful service—he makes him a watchman. As the size of the concern increases such methods tend to become impossible as remedies for a

¹ Those interested to see what such a law might be in this country should examine *Bulletin* No. 2. Unemployment Insurance for Massachusetts, published by the Massachusetts Committee on Unemployment, January, 1916, Boston.

situation that is constantly growing. Of course, another alternative is to discharge a man outright as soon as his powers begin to decline. Few employers wish to do so inhumane a thing."¹

And after a valuable review of the best existing plans he concludes that: "Whether or not it is deliberately intended, most industrial pension rules are so drawn as to make possible very serious limitations on the rights and freedom of action of the employees. The importance of this fact is not materially lessened by the probability that the exceptional power thus given the employer is seldom exercised. Although the employee has no rights, under the plans most generally prevailing, either to a job, or to a pension, or to the continuance of payments once the pension has been awarded, it is altogether likely, as a matter of practice, that he is not denied any of these things. Only one case has ever come to the attention of the writer where such rules were utilized to coerce the employees.

"As a man grows older in the service, the pension becomes more and more of a club in the hands of the employer with which to enforce 'loyalty' and subservience. Suppose the retirement age is sixty-five and the service required is twenty years; a man sixty years old who has been fifteen years in the service will hesitate before protesting against shop conditions that need remedying. He is not likely to be active in the union, and if there is discussion of a strike, he is likely to be against it. There is a barrier of only five years that separates him from retirement and provision for his old age. But even if he negotiates those years in safety and finds himself upon the pension roll, in many cases he is still without his freedom. He is a pensioner and dependent; he dare not speak his mind freely lest he be guilty of 'misconduct' and the stipend which keeps him from the poorhouse be taken away.

"The whole difficulty about industrial pensions is the fact that the theory on which they are based is fundamentally unsound. If it is nothing but a means of getting superannuated employees out of the shop without doing too much violence to one's humane instincts, the pension is pure charity. If, through the postponing of payments and even the decision whether there are to be any, to the end of a long period of service, the pension is to be used as a means of warding off strikes and inducing continuity of service, it is nothing more or less than a bribe."²

¹ FITCH, JOHN A. For Value Received. A Discussion of Industrial Pensions. *The Survey*, May 25, 1918, p. 221.

² FITCH, JOHN A. *Op. cit.*, pp. 223-224.

Discussion of the need of providing for old age cannot satisfactorily be left in this negative way, however. Employers do want to act and they will act increasingly to offer compensation to retired workers. And their plans, it would seem, can to a large extent meet the difficulties above cited if their administration is a joint one of managers and men, under which there is joint agreement as to what constitutes continuity of service, eligibility for the pension, misconduct, etc.

But here again, the fundamental difficulty is a deeper one. Old age is a universal hazard, and until the community as a whole is willing to share its incidence by some public scheme, the cost will fall unduly upon each corporation which is generous enough to adopt a plan.

Savings Funds.—One way to help meet the industrial risks, which involves no effort on the company's part which employees can misconstrue, is to encourage the organization of savings funds. Regular provision for laying aside a stated amount, or any amount, per week is made in an increasing number of plants; and there is everything to commend the plan if its administrative details are wisely handled.

The fund should be handled by the employees in cooperation with the company.

If the company will pay at least savings bank interest on the total deposits, it is usually convenient to let it hold the funds.

Withdrawals should be allowed at short notice—not more than a week and not less than twenty-four hours. However, every inducement should be held out to let the fund accumulate for specific purposes like paying for the winter's coal or the summer vacation.

Some one or a number of people should be charged with the responsibility of regular collection each week, on or immediately after pay-day.

Life Insurance.—Over 80 per cent. of the mutual benefit plans include a death benefit provision when death is due to either accident or sickness.

Many if not most of the group insurance plans provide a death benefit.

And, of course, the bulk of the business of many commercial insurance companies is in the so-called industrial policies for which the worker pays a premium of from ten to twenty-five cents a week for a benefit of from \$100 to \$500.

It seems to us doubtful whether, beyond the point of cooperative action in benefit societies, there is any great value—speaking from the point of view of administration—in a blanket, non-contributory life insurance policy offered by the corporation. It amounts, of course, to a compulsory saving which has its merits and its value to the employee. But the provision is open to the same criticism of charity and paternalism which the workers have raised from time to time against all group insurance and company pensions. We are not arguing against the importance of life insurance; we are only calling into question its value to the corporation comparatively to the value of putting the same amount into wages, or into a cooperative plan of action with the employees' benefit association.

Conclusion.—We recognize, however, in relation to all these industrial risks that, immediately at least, considerations of expediency will and should prevail. And if in the near future the enlightened employer can afford to and will help to meet the risks by insurance plans of his own proposing, the burden upon thousands of workers will be greatly lightened and everyone may be the gainer. But the danger is that such proposals, scattered as they necessarily are in occasional plants, will be used as arguments against the need of really public provision in all plants for sickness, unemployment and old age when that need shall come to be more publicly felt than it now is. Ultimately the scientific and human arguments for distributing the burden of these inescapable risks among all groups in the community seem to us unanswerable.

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CHAPTER XXVI

COORDINATION OF STAFF DEPARTMENTS

It is the purpose of this chapter to consider how policy is best adopted, transmitted and put into effect. Especially are we concerned to see how personnel policy or the policies of other departments where they are affected with a human interest, are "put across." The problem is to find effective ways of interdepartmental coordination; to see how the ideas of staff experts can be made to function in the line departments; to see how the several staff experts can work in harmony and not at cross purposes—can work with prior understanding of a common aim.

The attempt effectively to coordinate the staff departments involves a study of organized relationships in four distinct groups: Among the staff heads; among the line heads (foremen); within each staff department; and among the manual workers. The problem really is to see what organization is desirable in and between each of these four groups, in order to assure that right policies are adopted, that they are then known to the entire personnel in each group, and finally that they are put into effect.

Since it would be impossible to use as illustrations of our conclusions all the variations in executive structure which exist, we shall confine the discussion to one fairly typical organization scheme from which application to other executive arrangements can then easily be made. (See Chart IV.)

The Principle Underlying Sound Coordination.—We have in other chapters advanced the principle as applicable to industrial no less than to sound political government, that *every special interest directly affected by decisions concerning the operation of any enterprise or function should be a party to the making of those decisions.* The principle is immensely relevant to this discussion because it seems to us fundamentally true that any policy which is adopted is more likely to be a reasonable and wise one if those whom it affects help to shape it; that the transmission of policy to the affected parties takes place most naturally

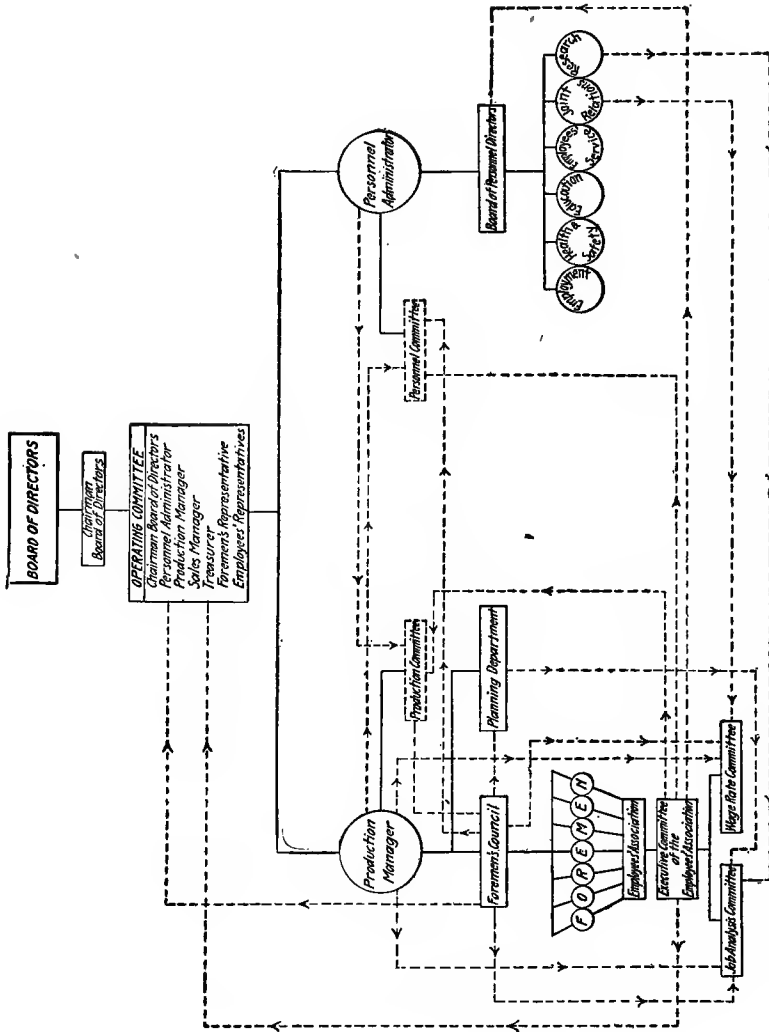


CHART IV.—Functional chart showing coordination of personnel and production administration.

when those parties or their delegates are present when the policy is adopted, know its implications and the reasons for its adoption, and hence can interpret it to their fellows; that the policy when so adopted, so transmitted and interpreted, has a much better chance of intelligent, willing and thorough execution, than if it is handed down as a fiat from the management.

Believing that this conclusion as to the wisdom of the representation of special interests is of fundamental importance to sound executive action, we shall proceed in this chapter to indicate how it should be applied. Those who feel that in the coordinating organizations which we are about to suggest, the foremen and the manual workers are given too prominent a place, are asked to remember the psychologically close relation which scientific observation discloses between knowledge, willing consent, and action. They are further asked to remember that over-organization may at times be necessary in order to assure the explicit recognition of functions and relationships—a truth which we shall later amplify. Moreover, while from our point of view it would be most inexpedient and unsafe to omit the foremen or hand workers from the several coordinating bodies which we propose, the superficial outline of the plan could be retained without necessarily retaining foremen and workers on every committee. Such omission, we would clearly state however, will in the future be fraught with increasingly great danger.

The Determination of General Policy.—We are assuming here that the Board of Directors is not directly active in determining any but the most general policies and those largely in the field of finance. There are, however, many companies in which the Board passes upon such matters as the institution of a personnel department, the establishing of a shop committee plan, the acceptance of collective bargaining and the like. When the Board is really in close touch with plant conditions there may be warrant for taking these questions of operating policy to it; but in general a sounder decision is reached if such matters are considered in the group which we shall presently describe as the Operating Committee.

We shall further assume that the president of the corporation is at the same time a member ex-officio of the board of directors and the executive chief of the factory organization. Immediately associated with him there will be four major, staff executives—

the personnel manager, production manager, sales manager and financial executive. For the determination of general operating policy, this group of five would constitute the nucleus of an Operating Committee.

The extent to which additions to this group would be advisable, depends on the size of the plant, the character of the product and upon the desire of the management to perfect its managerial technique in the direction of that representation of interests which is the really scientific method of organization.

If it is wise to constitute the operating committee in such a way that the values of coordinated action are secured, then our proposal that in addition to the above named five there be one representative of the foremen and two of the manual workers will be sympathetically understood. The operating committee is to consider, it should be remembered, all questions of a general nature, especially issues which affect the relation of one staff department to another, and of the staff to the line departments. In other words, it is making decisions that affect all four of the groups above referred to. And since this is the case, the reasons for representing all four groups are apparent. They all learn of contemplated policies before they are adopted; they all have a chance to express an opinion about them in advance; they all help to decide their adoption; and they must all cooperate in giving them effect. By securing a representation of the several groups in the coordinating body of policy determination the threefold problem is carried a long way toward a solution. For this body not alone decides policy; its members transmit it to their respective groups, and secure an expression of their attitude. The execution of general policies which are favorably received is then, of course, entrusted to the appropriate executive department.

This operating committee would meet at least weekly; indeed in some plants it has a daily morning conference. And its membership, if it conforms to the above suggestions, will be as follows:

- The Chief Executive
- The Production Manager
- The Personnel Manager
- The Sales Manager
- The Treasurer
- The Foremen's Representative
- The Workers' Representatives

Determination of Personnel Policy.—As already pointed out, some companies still leave to the board of directors a surprising degree of latitude in deciding plant policies. If, however, the power to decide is to be vested in the body which has the knowledge, the operating committee would usually be the deciding body. It would decide, for example, in the first instance what powers it would delegate to a new shop committee; and having once made that delegation it would not interfere in the exercise of that authority unless it had good reason to withdraw the delegation of powers altogether. It would, to take another example, decide whether or not to enter upon a collective agreement and on the general terms of that agreement; but it would leave to individual executives the work of actual negotiation.

Again, if joint job analysis and wage rate committees as described in previous chapters are authorized, a considerable degree of authority can wisely be delegated to them in their respective fields of standardizing work and pay. In short, the operating committee would either itself decide upon the important personnel policies, or it would decide who should decide them.

The Personnel Committee.—If it is understood, then, that beyond the determination of broad policies the work of the operating committee does not go, there is need for a body in each of the staff branches of management which will decide how their policy shall be carried out and will acquaint the affected groups with proposed new methods.

Policies which relate to personnel should, we propose, go for decision about methods of execution and delegation of duties to a Personnel Committee. The need for such a committee is already seen in a number of plants where the advantages of "selling" ideas before they are put into effect are clearly understood. For the personnel department's work is peculiarly in need of sympathetic understanding by workers and foremen if its efforts are to have any value. And there is in any organization where personnel work is to be effective, need of a *liaison* body to bring together the production and personnel managers, technical experts, foremen and workers, for the consideration of personnel procedure and methods. Indeed, the educational values of such a coordinating group are great, for in this way as in no other foremen and workers are brought "in on the ground floor," whenever new personnel questions are up.

The personnel committee is, however, primarily advisory to the personnel manager. The executive responsibility lies clearly with this functionary.

The composition of such a personnel committee might well be as follows:

- The Personnel Manager (chairman)
- The Production Manager.
- The Assistant Personnel Manager
- The Foremen's Representative
- The Workers' Representatives

This committee should meet at least weekly; and in many plants, in which it is already established, it keeps a written record of its decisions, turning over to the personnel department the actual administrative work mapped out.

Board of Personnel Directors.—Within each staff department lies a further field for common understanding and agreement upon policy and procedure; and in the personnel department the need for a united stand and a human point of view are obvious. For this reason, it has been found useful in most personnel departments comprising more than two or three workers to have a definite organization within the department. This assures regular conference between the personnel chief and his executives on employment, health, safety, training, research, service and joint relations, and secures the benefit of the interchange of technical ideas and of the wholesome expert criticism of department colleagues. We shall refer to this group as the Board of Personnel Directors. And so closely does the work of this board touch upon the interests of foremen and workers, that there is great advantage both from an administrative and an educational point of view, in having representatives of these two groups present. In plants where there is an employees' association which has its own executive secretary, he would also be a logical member of this board.

Some personnel managers carry this idea of departmental organization one step further and have a monthly meeting of the entire personnel staff, including stenographers and messenger boys, in which a definitely educational purpose is held in view. The potential values of this idea are great, especially when the importance of cultivating a right attitude throughout the personnel staff is understood.

Foremen's Council.—But the work of executing personnel policy will devolve not alone upon the staff of the personnel department. There will be many personnel problems which closely affect the foremen and will depend primarily upon them for successful execution. It is for this reason that we urge that a representative of the foremen be on the operating committee, on the personnel committee and even on the board of personnel directors. And in their relation to the production department there will be other bodies on which the foremen can profitably be represented. There is, therefore, need of an advisory foremen's body to give expression to their common interests and point of view.

All the foremen of line departments should constitute a foremen's council; or, if this involves the creation of an unwieldy body, the foremen of each administrative division or group of related departments should compose a foremen's council. This organization should then have as one of its major functions to consider new projects which the operating committee or some one of the staff departments were proposing for adoption. Its work would, of course, be advisory in this connection; but it would perform the indispensable service of making clear through the foremen's delegates to the several committees here described, the position of the foremen on any moot question.

Employee Groups.—How would changes in personnel policy be taken up with the manual workers? We have already provided for representation of the workers on the operating committee, and personnel committees and on the board of personnel directors. And where there is a shop committee or employees' association, the presumption is that the employee delegates to the managerial committees will report all proceedings and decisions back to the rest of the employees.

Where no employee organizations exist, the difficulty of establishing any interchange of views is obvious. One of the cogent reasons, indeed, for such organization is to provide an agency through which this important work of transmitting, interpreting and carrying out policies among the rank and file, can be accomplished. In so far as any matters of policy under advisement relate to work and pay, our earlier discussions have suggested representative agencies through which their consideration would normally proceed.

There is, in short, definite need of an organization of the manual

workers with whom the management may advise about policy; and which may, if joint relations have progressed that far, select delegates who can undertake the actual work of deciding policies in conference. But managements should be constantly alive to the danger of a gulf developing between employee delegates and the workers themselves. The delegates, in consequence of the educational influences of their committee work and because of the closer touch with all the facts which their committee action brings, can easily grow apart from those they represent.

In large plants, a secret ballot referendum on questions of new policy affecting all the workers will often be the safest procedure.

It is important now to recapitulate this discussion—to see just what its suggestions involve. We have been proposing that once the broad outlines of personnel policy are determined upon, their application must be considered in relation to four different groups in the factory in order to assure their wide understanding and ready adoption. Personnel policy must be “sold” to the operating committee at the top, to the heads of the line departments, to the members of the personnel department and to the manual workers. Hence we suggest a board of personnel directors to relate the personnel department’s administrative work to that of the other administrative and advisory departments; an organized relation between the personnel department and the foreman group; a formal organization within the personnel department itself; and contacts by several means with groups of the workers. In this way a new policy never comes to any group as a surprise; it is first proposed, then discussed, then adopted—and at every stage the affected individuals are brought into council.

Determination of Production Policies.—Because production policies so often affect the working force directly, there are sound reasons for organizing their adoption and transmission in a manner similar to that just considered in relation to the personnel department. This would mean the creation of a committee, called perhaps the Production Committee, composed as follows:

- The Production Manager (chairman)
- The Personnel Manager
- The Assistant Production Manager
- The Foremen’s Representative
- The Workers’ Representatives

And where special problems were up, such other executives as the head of the planning department, the chief engineer, the chief chemist, etc., would be called in.

It is the function of this committee to advise with the production manager about methods of putting new production policies into effect—the executive power remaining, of course, with the production head.

It is important to give at least one example of the direction in which this committee would work. For this purpose we shall consider the function of planning work.

Many plants have today a special staff department (called variously, planning department, methods department, efficiency department, etc.) to which is assigned the function of studying to map out and improve methods of production. It will be clear from what has gone before that this work of planning and study should benefit by the advice of the foremen, of the personnel department especially on its research side, and of the workers to be affected by proposed changes. None of the planning department's proposals should be adopted before these three groups have considered and approved them. And since on the production committee these several groups are represented, it will be desirable to have the production committee pass on the planning department's proposals. Indeed more than that is needed.

Experience with the difficulties that planning department work has encountered in the past leads us to urge with confidence that any important change in working methods which affects most of the shop should be laid by the planning department first before the executive committee, and if endorsed by it, before the foremen's council and the shop committee of the workers.

There should, in short, be an organized basis for agreement on changes in process between staff and line departments, among line departments, and with workers. And any organization which ignores this problem of scientific correlation of authority, knowledge and action, is bound to be inefficient—if not because of deliberate malingering, then because of unnecessary frictions and maladjustments.

The Case for Over-Organization.—It is necessary before proceeding further to meet any possible objection to such "elaborate" organization in the contacts between staff and line departments and between process and personnel departments, as we are

here advocating. Are we not proposing to over-organize the factory?

Those who have watched the installation of scientific management systems will remember that it usually passes through an introductory period in which a large force of planning and clerical workers is needed. Once the determination of methods, standard practices and records is achieved and the mechanism is operating smoothly, the staff required is much smaller. But the introduction of the system and its adequate comprehension by all in the plant is made easier at the outset by having every function assumed by a separate person. As soon as the number and nature of the functions are recognized, it becomes possible to consolidate some functions and redistribute others.

The analogy holds measurably true regarding the initial over-organization of any group relationships. The first condition of successful coordination is to see distinctly all the groups to be coordinated—all the points of view which have to be brought into working harmony. The second condition is to assure in some way that those groups inter-act consciously and deliberately. We have no fondness for "committees" as such. We are not even urging that the several correlating bodies here proposed are necessarily the best possible or are composed of the right functionaries. But if any plant desires to provide the machinery under which proper coordination of executive acts takes place, we believe it will eventually be led to create and utilize conference bodies which are substantially the same in character and composition as those above suggested.

The basic principle is clear. Essential in every organization is a definitely organized understanding between those who plan, those who oversee and those who do the actual work; each group—if the organization is to operate smoothly—must act with the full knowledge and agreement of every other group. Intelligent application of this principle in any given plant may not be easy; but it is only the principle and not the details that we are urging in all our proposals. And we hasten to add our appreciation of the fact that a degree of organization which, for example, is imperative in a plant of over 1000 employees may be exceedingly cumbersome in a smaller organization.

Even in relatively small plants, however, the fault with the executive staff is today frequently a conspicuous *under-organization*. And this means, explicitly, that the relation of the

several executive functions to each other is not recognized, and that the reason for having representative counsel on executive decisions is not appreciated.

Moreover, the value of *formal conference*, even with other executives with whom one may be in contact forty times a day, is not to be ignored. For formal conference, properly conducted, gives a definiteness, a deliberateness, a sharpness of outline to agreed policies, attainable in no other way.

We find, therefore, that the objection of over-organization is one that really need not be a serious deterrent. To get the widest possible agreement to a course of action before it is undertaken is the one best way of assuring that the action will be put through. *Coordination of staff departments is in its simplest terms merely the effort of all concerned to agree in advance upon a goal and upon the road to be taken to reach it.* And it is true here, as it is of so much factory procedure, that what may seem to be the longest way round is in reality the shortest way.

Determination of Sales Policy.—In the form of plant organization which this chapter assumes, general sales policies would be decided in the operating committee. How drastic a proposal this is, may not be at first appreciated; for many firms are still unconscious of the extent to which they allow the sales organization to dictate to the rest of the management. If the salesman can get the orders, it has formerly been true that the shop will be turned on end if necessary to fill them; if he cannot get them, the rest of the organization sits by paralyzed.

The point of view about the selling policy which is increasingly recognized as sound is at almost the other extreme from this. The sales force is being called upon to sell what the production force can make. And this certainly comes nearer to a sensible relationship of sales to production than the arrangement now so frequently met.

The best aim, however, is to get executive agreement in advance through the operating committee, on the selling policy to be followed. The ideal is that no staff department should be in supreme control, but that all should agree on general policies in the entire field of operation.

It is probably true, at least for the present, that all the personnel manager can do to oppose a sales policy which spells irregular work, rush orders, overtime work, small-lot orders, etc., is to use his influence and knowledge in the operating com-

mittee. But this will be a valuable educational service and he will soon find support for his advocacy of regularized production from the production manager, foremen and workers. For it will soon be obvious to these groups that on all such matters as changes in styles and specifications, decisions about amounts of finished goods to be kept on hand, quality and amount of goods that can be delivered on certain dates, these groups should be consulted. The adoption of improved sales methods will then devolve upon the selling staff; and they will find, as our next chapter indicates, an appreciable body of suggestive experience already at hand to help in devising a sales policy which regularizes orders and demand.

Determination of Financial Policies.—Obviously policies which affect the balance sheet are likely to work back and influence the pay-roll—and perhaps other elements in the personnel procedure. Yet until recently it has usually been considered that the financial end of the business was justifiably a law unto itself, answerable for its decisions only to those “on the inside.” A change in this attitude is now discernible, however, due to income tax and corporation tax laws, and to the need and difficulty of securing additional capital unless financial policies and conditions are known. Moreover, the recent extension of the shop committee movement will involve in an increasing number of cases the consideration of fiscal policies with employees.

Companies should realize, therefore, how intimately connected with personnel matters their financial problems are. And even beyond that, managements should now consider the benefits in increased knowledge, confidence and sense of security, which a consideration of financial policy with employees is tending to bring.

As to the first point, corporations may be prepared to admit that the fact of watered stock, large undivided surplus, high depreciation rate and large dividends, may affect the management's attitude toward labor issues. But, they may say, “What of it?”

Our answer is that the reason for concern is that not only the management's attitude is affected, but that of the workers as well, and often the public's attitude also, by an unsound financial policy or condition. A large New England corporation was threatened with a strike in several of its plants located in a city where “industrial unrest” was becoming so chronic as to have lost the public attention and sympathy. But the day after the

strike was called, the corporation's annual report was issued and carried as a column story on the financial page of all the papers. It indicated a very profitable year with high dividends and a large surplus. Of course, everyone, worker and consumer alike, who saw the report, drew the natural conclusion that the demand for a living wage was a wholly reasonable one. And from that moment the company had lost the strike.

This is only a graphic example of what is happening all the time. Each day the newspapers carry financial stories and advertisements of the profit-making ability of this or that stock. The workers, or the workers' representatives, see these stories. And having no other knowledge on which to base any more exact opinion, they necessarily take them at their face value, draw their own conclusions and act accordingly.

Indeed, even if a corporation's profit and loss statement does not get into the papers, the workers' reaction may be the same as when they see such a statement. For they tend to argue from the cases they know to their own company's situation; and the fact of secrecy in the corporation's affairs only increases the suspicion that the company is so profitable that it wouldn't do for the management to mention it. The fact is that the attitude and conduct of workers is governed by the information they can glean; and if they have only half the financial facts, it should not be surprising if their subsequent action is only half sound.

It may, of course, be urged that it makes no difference what the workers think; that the profits are not their concern. To this there are two answers. First, that if it does make no immediate outward difference, the inward difference, the difference in attitude, cannot be ignored. Facts about profits relate themselves closely and basically to the worker's interest in his work, to his interest in economy of operation, to his sense of "company loyalty." If he feels that he is just a cog in a machine which grinds out wealth for others, his interest declines (or is never stirred), any possible motive for economy disappears and he becomes indifferent to claims for his loyalty. And the resulting attitude, far from being inconsequential, is in reality one of the outstanding facts and causes of the present industrial uneasiness. In short, the time has passed when the amount of a firm's profits can be considered as a matter of no proper concern to either workers or consumers.

In the second place, the fact that the amount of profit does

have some relation to the labor problem is already admitted by those firms which adopt any type of profit sharing or stock purchase plan. In these cases the corporations have virtually said, "Our profits are made with the help of the workers; and we shall therefore reimburse them in whole or in part for their share in the result." And it is significant to note that where these plans—especially profit sharing—are in use, the company usually finds it wise to adopt also some fixed policy by which it can make plain to its employees, facts regarding amounts of outstanding stock, size of depreciation funds, reserves, surplus, and methods of computing "fixed charges" and "net income."

What is true regarding the desirability of the dissemination of knowledge about financial affairs in profit sharing companies, is becoming increasingly true in non-profit sharing firms. The time has come when it is safest to have these policies of a character which it is not too difficult to justify to employees and consumers, if an hour arrives when justification is necessary. And such an hour has already come in corporations where shop committees or labor unions are pressing for wage advances or for information about operating costs, as well as where profit sharing is in effect.

It is a great mistake to think that industrial affairs can be neatly divided into those questions which concern workers and those which concern management. No absolute line of demarcation exists. The price of raw material and its quality, the amount of it which shall be carried in stock, advertising and selling policies and the amount of finished goods to be carried in stock—these matters not only have their result on the ultimate outcome of the year's profits, but they may also mean the difference between bankruptcy and solvency, between a regular flow of work and constant interruptions, between a condition where the material is easily worked and where the amount of "botheration" is annoying and fatiguing to the worker. Obvious as all this seems the conclusion to be drawn from it has not thus far been so obvious. But an increasing number of managers are coming to see that *employees' interest in financial policies is not something to be feared but something to be welcomed because of the better coordination in all the above directions which it promises.*

This, then, is the second reason for urging consideration of the relation of financial to personnel issues. Illustrations are plentifully at hand to show that where managements have taken workers fully, freely and sincerely into their confidence on

financial matters the results have been mutually satisfactory. "It is a policy of the executives of the Greenfield Tap and Die Corporation," says one of its officials, "to discuss with their employees frankly and openly business prospects and policies on an occasion when a large group of employees is assembled together. The connection between general business and a man's own industry and prosperity can be put to a group of employees . . . in elementary basic terms . . . I believe that every employer should stand ready at critical times to analyze with his men in this way the relation of their particular company with world trade . . . This policy . . . prepares for unavoidable troubles. It smooths away unnecessary anxiety of the men. It tends to get cooperation. If there were a wider understanding of the function of money and finance there would be less unrest, less exaggerated notions of the freedom that the head of a business is supposed to have from surrounding restraints."¹

Another company called its shop committee together soon after the armistice and made a statement which is in part as follows:

"A condition of business depression has been brought about by a very decided falling off in orders, due to two principal reasons. First of all our business is divided between export and import, a greater quantity being export. Domestic business has dropped off because everybody is anticipating a decline in prices, etc., etc.

"The big proposition that confronts the company at this time is the conservation of capital in not piling into the finished stock room dollars worth of stuff that cannot be used. The other proposition is turning into cash those things that are in the finished stock room, because for every \$100 worth that lie there one day, the company loses six and two-third cents."²

It is interesting to contrast this policy with that of a company where one worker said, "Every morning you went there, you were never sure but what you were the next one to be laid off."

Another company whose business was affected by the armistice took its shop committee into conference to advise it as to ways of meeting the situation. Among other things the company found that the rate of production had slowed down considerably

¹ PAYNE, FREDERICK H. Talking Finance to Employees, *Industrial Management*, July, 1919.

² WOLF, DALE. Successful Industrial Democracy, *Industrial Management*, July, 1919.

because everyone feared a lay-off. Early in 1919 orders began to increase, and communication of this fact to the workers at once brought a resumption of the normal working pace.

There is one final aspect of the relation of finance to personnel, which is destined to assume importance as time goes on. In August, 1919, the railroad brotherhoods issued a statement regarding their proposal for the operation of the railroads, which contained this sentence: "We demand that the owners of capital, who represent only financial interest as distinguished from operating brains and energy, be relieved from management, receiving Government bonds with a fixed interest return for every honest dollar that they have invested."¹

This demand strikes a new note in American labor declarations; and is of significance for us because it shows a large body of workers definitely stating that they view with apprehension the too-complete control of industry by the "owners of capital." It would be a mistake to say that this attitude is general throughout the working class; but it reenforces our earlier statement that the importance of being able to justify financial policy is a real and growing one. Workers in all the basic industries—transportation, coal-mining, iron and steel manufacture, textiles—are beginning to go "behind the returns." This is a fact in which managers may see grave dangers; but it is none the less true, as some companies have already demonstrated, that workers' interest in the finances can be made the occasion for securing a cooperation in economical production which it will be impossible to achieve in any other way.

Adequate Coordination.—Our conclusion from this survey of the relation between the different staff groups is simple but exceedingly far-reaching: *All general policies should be decided, not by the staff department which later executes them, but by the group of staff heads whose primary job is to secure balance and harmony in the management of the organization.* Adoption of this policy will embody one of the bed-rock principles of sound organization.

For sound organization, it is well to remember, is not without its definite principles. It does not grow spontaneously; it develops only as certain broad rules are adhered to. And the task of coordination—at the top and at the bottom of the organization—will be greatly simplified if those rules are in effect. It

¹ *New York Times*, August 5, 1919.

will, therefore, be useful in conclusion to state briefly those principles of executive action which apply both in the management of a whole enterprise and within each single staff department.

Principles of Sound Executive Organization.—The work of each executive will be clearly set forth in writing—an executive's job analysis. This statement will make plain the limits of his authority and responsibilities. And it will show to whom he reports.

The work of the executive is to *plan, organize, delegate* and *supervise*. He is responsible for seeing that all the details of the work for which he is responsible are delegated to some one.

The executive is in touch with the work of those under him through the use of those summarized records which are necessary to give him a grasp of the crucial problems and large results. He will decide which records it is important for him to see; and will keep these at a minimum. He will be presented with full details only when these are necessary to help him in forming decisions. He will also keep a permanent record of his own important decisions.

Records of executive policy and executive accomplishment should be currently available. Too much time is spent in every organization by executives in "picking up the threads," in explaining to subordinate executives policies which have presumably been in force for some time, in trying out again mistaken methods, of which a second trial is quite unnecessary.

The executive in delegating responsibility will make as specific a statement as possible of the work to be done. *He will also delegate all the authority necessary for the proper performance of the work.*

The executive will have the duties of his subordinates clearly set forth in writing. Each one will be responsible for certain specific duties. Every duty will then surely have some one person who is responsible for it.

The executive will see to it that no man is indispensable to the organization. This is meant only in the sense that each executive position should be adequately understudied.

The executive will see that each individual is allowed to function so far as possible in the field where he is qualified and interested. It is less important to have a neat and logical organization chart in the office, than to have all the necessary functions distributed so that they may be performed effectively.

The executive will allow the understudies sufficient chance to exercise responsibility and make decisions to be sure that they can "take the reins" and that they will do it wisely.

The executive will see to it that no man is expected to do more in a day or week than can reasonably be done.

The executive will give full credit to others for results achieved by them. He will lead and not drive; he will challenge and stimulate ability by *giving it a chance*; he will foster it by giving it recognition when it is displayed.

Administrative machinery is good, it has been wisely summarized, "when the proper tests are prescribed for the qualifications of officers, the proper rules for their promotion; when the business is conveniently distributed among those who are to transact it, a convenient and methodical order established for its transaction, a correct and intelligible record kept of it after being transacted; when each individual knows for what he is responsible, and is known to others as responsible for it; when the best-contrived checks are provided against negligence, favoritism, or jobbery in any of the acts of the department."¹

Charts of Coordination.—Organization charts can serve a useful purpose in keeping everyone's thinking straight about the correlation of functions. But confusion will be avoided if it is recognized that charts are of three distinct types to convey three different kinds of information. And until all three are understood, the whole story of the distribution of executive work and authority is not apparent.

There is, first, the *authority* chart, which shows the line of authority, of policy determination and execution.

There is, second, the chart of *functions*, which shows what functions each department is supposed to perform.

And, third, there is the *personnel* chart, which shows how the several functions are distributed among the executives. Usually, the first chart can be combined with the third to show the line of authority in terms of those who exercise it.

To help make graphic the proposals of this chapter, we have included as Chart IV our general conception of the interrelation of the different functional groups of the personnel and production departments. To keep the chart as simple as possible we have not shown how these two departments might be coordinated with sales and finance; nor have we included any relationship to out-

¹MILL, J. S., *Considerations on Representative Government*, Chapter II.

side bodies such as would be entailed if a collective bargain existed with a labor union.

Administrative Problems of a Holding Corporation.—There is a final aspect of the problem of administrative correlation which requires separate consideration, as a problem of growing prevalence. We refer to the correlation of the central office and the factory office in a holding or operating corporation which controls a number of plants.

It is a fairly well established conclusion that such central organizations will not wisely hold in the central office the determination of distinctly local policies and the administration of local practices. The right principle, difficult though its application in any given case may be, is to let the central group determine policies concerning which uniformity among the units is essential, but beyond that to leave wide discretion to the local plant management.

Even so the decisions of the central office should be reached only after discussion among those involved. The principle of the representation of every special interest in decisions which affect them should apply here as elsewhere. Specifically this means that the respective plant managers of an operating company should form the nucleus of the directive group of the parent company.

Often, of course, these parent companies construe their function as that of "service" agencies for the smaller units. In all such cases the relation of the staff experts—cost, finance, production, research, personnel experts—to the respective departments of the several plants becomes at once a problem. Suppose, for example, the parent company has a manager of industrial relations; what shall be his relation to the personnel administrator of each plant? Broadly speaking, his relation should probably be in part administrative and in part advisory. It will be useful to have uniformity among the plants as to certain forms, records and standards of terms of employment; although the achieving of this uniformity by a mere fiat would be a rather unwholesome way of getting results. But on many lesser questions, it will be important for the staff expert to "sell" his ideas by persuasion and conviction rather than force their adoption by an exercise of authority.

This principle should apply in every staff branch of management, and for the reason that the local administration can only function in accordance with the staff's advice if it knows why

it does what it does, and believes that in following such advice it is doing a good thing.

The tendency in industry is definitely toward the operation of a number of plants under one management. In such consolidations, a period of highly centralized control has usually been followed by a gradual decentralizing of control and authority to the local manager. This transition appears to be not only inevitable but sound; and the sooner it is effected the better. The central staff group has the expert knowledge and broad outlook to make its advice invaluable. But in action the local group must determine methods and apply with flexibility the policies agreed upon. The ideal balance to be sought is one which harmonizes the freedom of action and initiative of each local plant with that degree of uniformity among all which proves to make for efficiency and economy in the operation of the entire corporation.

Two of the foremost students of government in the last century have analyzed the problem of centralization in terms which are so completely applicable to the relation of the holding company to its constituent plants, that they merit thoughtful study. Indeed, they have given classic expression to what appear to us to be the fundamentals of this subject.

“Centralization,” said De Tocqueville, “easily succeeds, indeed, in subjecting the external actions of men to a certain uniformity, which we come at last to love for its own sake, independently of the objects to which it is applied, like those devotees who worship the statue, and forget the deity it represents. Centralization imparts without difficulty an admirable regularity to the routine of business; provides skillfully for the details of the social police; represses small disorders and petty misdemeanors; maintains society in a *status quo* alike secure from improvement and decline; and perpetuates a drowsy regularity in the conduct of affairs, which the heads of the administration are wont to call good order and public tranquillity; in short, it excels in prevention, but not in action. Its force deserts it, when society is to be profoundly moved, or accelerated in its course; and if once the co-operation of private citizens is necessary to the furtherance of its measures, the secret of its impotence is disclosed. Even whilst the centralized power, in its despair, invokes the assistance of the citizens, it says to them: ‘You shall act as I please, as much as I please, and in the direction which I please. You are to take charge of the details,

without aspiring to guide the system; you are to work in darkness; and afterwards you may judge my work by its results.' These are not the conditions on which the alliance of the human will is to be obtained; it must be free in its gait, and responsible for its acts, or (such is the constitution of man) the citizen had rather remain a passive spectator, than a dependent actor, in schemes with which he is unacquainted."¹

And John Stuart Mill supplements this observation with the following statement of a positive principle:

"The authority which is most conversant with principles should be supreme over principles, while that which is most competent in details should have the details left to it. The principal business of the central authority should be to give instruction, of the local authority to apply it. Power may be localized, but knowledge, to be most useful, must be centralized; there must be somewhere a focus at which all its scattered rays are collected, that the broken and coloured lights which exist elsewhere may find what is necessary to complete and purify them. To every branch of local administration which affects the general interest, there should be a corresponding central organ, either a minister, or some specially appointed functionary under him; even if that functionary does no more than collect information from all quarters, and bring the experience acquired in one locality to the knowledge of another where it is wanted. But there is also something more than this for the central authority to do. It ought to keep open a perpetual communication with the localities—informing itself by their experience, and them by its own; giving advice freely when asked, volunteering it when seen to be required; compelling publicity and recordation of proceedings, and enforcing obedience to every general law which the legislature has laid down on the subject of local management."²

The phrase, *power must be localized*, should, as the key to the successful administration of a large operating company, be framed for all the officials of such companies. And the phrase, *knowledge must be centralized*, should be continually impressed upon all local managers. With this interaction of forces, results promise to be the best. Yet the problem is after all more com-

¹ TOCQUEVILLE, ALEXIS DE, *Democracy in America*, v. 1, pp. 113-114. Boston, ed., 1876.

² *Considerations on Representative Government*, Chapter XV.

plex than we have yet intimated. And it is not really faced in any corporation till the executives soberly ask themselves how many plants and what number of employees can be effectively brought under one directive organization in a given industry. Upon this question, there appears to be room for significant experiment. For certainly the conclusion seems to be inescapable today, that some plants are too large for proper management and that some operating companies have too many units to assure the fullest effective use of the central staff by each local plant. That there is a right size for plants and corporations in each industry seems a probable hypothesis. And it certainly is clear that administrative correlation is well-nigh impossible in organizations which have grown without giving any thought to what is for them the efficient size.

Conclusion.—It is clearly necessary to provide in each organization that the several staff departments in relation to each other and to the line departments, supplement each other rather than work at cross purposes. Only so can intelligent, unified and balanced executive action be secured.

Personnel and other staff managers are looking at the same problem of applying labor to material to transform it into useful objects, from different but equally indispensable points of view. And successful management means that at all times and on all significant executive decisions, these points of view have been harmonized or at least brought to a practical working adjustment. What degree of coordination there should be beyond this point in order to secure a regularized production and steady work, we shall consider in the next chapter.

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CHAPTER XXVII

STEADY WORK

“The most outstanding failure in our industrial system—affecting alike the interests of the employer and the employe,” says one of America’s foremost industrial engineers, “is the tremendous amount of intermittency of employment and actual unemployment. If the individual manufacturer or a given industry is going to take up personnel work, this is certainly the place to start, for thousands of employers have learned how to give steady employment in season and out of season, in good and bad times. Unemployment and its twin sister intermittency are certainly not acts of God, but usually due to bad management, or rather, due to the absence of forethought and planning.”¹

Again and again throughout this study we have been faced with the importance to the worker of having some assurance of regular employment. It should not be necessary to urge the importance of regularized production to the management, since obviously if the plant could run 300 days every year the amount produced and its value, other things being equal, would be commensurately larger than is now the case. It is, nevertheless, a matter for remark that so many plants have been willing to rest content with an irregular flow of work, due to whatever reason; and have not always shown an affirmative determination to keep running.

In all probability, however, the extension of personnel management will tend to quicken interest in regularization; since, even if buildings and machinery can stand without working, the workers themselves are all the time directly dependent upon their efforts for their week to week sustenance. So true is this and so fundamental a fact is it, that it can be laid down as an axiom of sound management that *no organization has really solved its problem of securing the interest, loyalty and enthusiasm of its members unless it is assuring them work (or some compensation in its absence) the year round.*

¹ COOKE, M. L. An All-American Basis for Industry, Philadelphia, 1919, p. 3.

This truth has not gone unrecognized, and in the last few years, due largely to the insistence of personnel executives, a number of plants have undertaken to regularize employment. No discussion of methods gets beyond the elementary stages, however, which does not distinguish the several causes of irregular work. There are four large groups of causes, and attention to only one will naturally not complete the solution. Causes of irregularity lie in individual deficiencies, poor factory organization and co-ordination, seasonal employment, and industrial depressions. While it will be useful here to get a broad idea of the entire problem we shall consider at greatest length the second and third causes—factory maladjustments and seasonal fluctuations.

Individual Maladjustments.—Irregularities of work which are due to the individual may be found when the worker is a normal individual and when he is in some way deficient. To the extent that he is normal, it is presumably one of the primary tasks of the personnel department to secure his proper selection and adaptation to the organization—a problem which we have already considered. There is no denying that lack of such proper adjustment has contributed to making even normal individuals uneasy and inconsecutive at work. And this is a cause of irregularity in attendance today which is a price industry must pay for its omissions of the past.

Where, however, the cause is more definitely pathological the remedy beyond the initial detection of an abnormal condition is not at hand within the individual plant. By improved selection methods it will be possible and essential to identify: The feeble-minded—and to a certain extent find work adapted to their powers; the epileptics—and perhaps find work for the milder cases at which the hazard to them and their fellows is negligible; the paranoiacs, those who are victims of recurring obsessions, delusions or fits of melancholy; those with a chronic wanderlust and complete absence of powers of application; and the chronic inebriates. But while individual factories can and should help by identifying such unfortunates, the major responsibility for their protection and custody rests upon the community; and the provision of community agencies for the segregation of the more acute cases is the only safe and humane procedure.

Factory Maladjustments.—It will be hard to distinguish at all times those causes of irregular work which are due to lack of orders from those due to seasonal demands. Without trying

to draw any hard and fast line we shall therefore consider methods of regularizing production from the point of view of the different administrative departments; since upon each of them devolves certain responsibilities for its achievement.

Personnel Procedure.—In addition to all its efforts to assure that the workers are fitted for and like their work, the personnel department will have at least two special concerns in its campaign to regularize employment. It will see to it, first, that there is no lay-off in any department before the personnel manager is notified. Since "a good rule works both ways," it will be wise to urge workers to give notice of leaving a week ahead, and to have a definite rule that *no one will be laid off without at least a week's notice*—and two weeks would be better. It will frequently happen that, if lay-offs in one department are known in time, the workers can be shifted to other departments. If the lay-off is definitely temporary and the alternate work pays less than that from which workers are being laid off, a separate "retainer fee" can be devised, which represents the difference between the two rates. Workers' objections to this sort of transfer have been successfully overcome in several plants where by the device of a "retainer fee," earnings at the lower paid work were made to equal the workers' former income.

In the second place, the factory force will have much more flexibility if the personnel department adopts a policy of *training for more than one job*. Whether such training is undertaken initially or on the side while the worker does his own job is of secondary importance. The important thing is to realize that if the worker knows but one operation, irregular work cannot at times be avoided. This idea gets useful elaboration in those plants that have a flying squadron (usually picked with the advice of the personnel department), the members of which know all the operations of a plant and can work temporarily in any department where there is need of workers. By this means a smooth flow of work is assured, and irregularity of employment for those at adjacent jobs whose work would otherwise be interrupted, is thus reduced.

Selling Methods.—Under present conditions success in stabilizing production depends ultimately on ability to prophesy demand. Or, to put it more explicitly, it depends upon ability to get orders from those who presumably can prophesy the demand. To know approximately how much of the plant's possi-

ble production can be disposed of at more than the cost of manufacture, is essential to steady operation. Superficially this is a "sales problem"; fundamentally it is a problem that ramifies into the whole of each industry and involves an answer to those formidable questions: What do people want; and how much of it do they want? This problem we shall speak of as the "organization of demand," and consider it in due course.

The first requisite in a sales policy which looks toward the smoothing out of the production curve is the *will to regularize*. The shopworn dictum that where a will exists a way will be found, applies here aptly, as the experience of many corporations shows. The sales manager must himself be "sold" enthusiastically to the idea of regular work.

There should at the start be clear agreement in the executive staff on certain fundamentals. There should be agreement (1) on the maximum volume of production to which the plant will hold, despite excess orders, through a given period in advance—say, a year; (2) that this standard output will not be increased without prior staff agreement; (3) that the firm will "go after" regular business.

Once agreement is obtained among the executive heads to these three maxims of regularized production, it is impossible for the sales department to descend upon the plant with rush orders requiring overtime work or an extra crew of workers, or enlarged plant, and then follow this rush with long periods in which it secures few orders. It is distinctly up to that department to get the orders coming in steadily and to have delivery dates so arranged that the work can flow regularly. Devices which have successfully achieved this end are:

(a) Offering special inducements to buyers in off-seasons or dull periods, either by discounts or by promises of prompt delivery or storage at the plant until the goods are wanted. There is one firm which "has induced customers to put in advance estimates of their monthly requirements. An important factor in inducing customers to give the estimates is that although the estimates do not limit the customer, customers who do not exceed their estimates are preferred in busy times to those who order in excess of them."¹

(b) Offering inducements to salesmen to sell in off-seasons or dull periods. These may take the form of bonuses on sales.

¹ SLICHTER, S. H. *The Turnover of Factory Labor*, p. 271.

Some firms no longer use jobbers because they believe they can keep a more affirmative control over demand and sales if they make use of a sales organization of their own. For where selling is done through a jobbing house, companies find that the jobbers "lay down" on their selling except in the midst of the busy season. Naturally such jobbers have no special interest in building up out-of-season sales, unless a definite inducement exists.

(c) Carrying on a special advertising campaign when business is slack.

(d) Inducing salesmen on the road to study and report constantly on changes in the trend of demand. To this policy some firms which produce articles in which style is a factor, have added another. They find that if salesmen visit customers more frequently, they get a closer correspondence between orders and acceptances of the finished goods.

(e) Selling in markets whose dull seasons dovetail. In a large country like the United States, or in trade with South America, such different climatic conditions are found simultaneously that sales can be kept going on certain seasonal products the year round. The larger the area of the market, the more likely is a brisk demand in one section to offset a slackened demand in another.

(f) Selling and advertising an article with a trade name and a standard quality for which a regular demand can be built up on the merits of the article.

(g) Providing a subsidiary line of goods for sale which can be used as a "filler." Much has been done in this way by firms in a variety of industries.¹ This policy depends largely, however, on favorable production conditions, adequate equipment, trained workers, etc.

Production Methods.—If the executive staff has agreed to a standard volume of output and the selling department has secured the orders, the production and personnel departments are left the task of keeping the work flowing smoothly from one department to the next. This means, of course, that there must always be sufficient raw material on hand; that enough special parts of machines which are likely to break are in stock so that breakdowns are quickly repaired; that the method of perpetual inventory is in use; that weather conditions have as far as possible been

¹ See, e.g., the instances in SLICHTER, S. H., *op. cit.*, pp. 272-274.

counteracted by artificial means. Much has in recent years been done in the way of special shelters in the exposed industries, by refrigeration and cooling of the air in industries demanding cool weather, by humidifying in industries where a constant per cent. of humidity is needed.

Leveling of the output curve requires also the rectification of any "neck of the bottle." Many plants have one department where the work always tends to accumulate because it has never been supplied with sufficient machinery or workers. Elimination of these points of congestion is urgently needed in order to lessen the strain and overtime work required of those in the rushed department, and to reduce the risk of temporary shut-down at the processes before and after it.

Manufacturing to stock is possible, of course, only where a standard product or standard parts are made. Not the least value in a policy of standardizing parts throughout an industry, is that an accumulation of parts made to stock in a dull period is less speculative than where no standardization obtains.

A less scientific expedient is to use the working force to overhaul the machinery or clean up and paint the plant during any temporary slump. Some firms postpone extensive repair and renovation work until such times.

The manufacture of more than one type of goods is an increasing practice. If a firm can "dovetail" the busy season for one of its products with the busy season for another, it can run the year through without interruption.

The practice of a total shut-down two weeks a year is not without its advantages, especially if the period is chosen in which work is slackest, and if employees know ahead when it is coming. However, unless workers are paid during this vacation as suggested in previous chapters, the factory closing will have all the effects of irregular work—it will constitute an arbitrary withdrawal of the chance to work and earn.

Financial Methods.—As Mr. H. L. Gantt has persistently pointed out,¹ the price at which goods are offered in dull times can affect their sale tremendously. The manufacturer who can in a depression offer goods at the same price as in normal times, will find his business picking up sooner and faster than that of his competitors. But, as Mr. Gantt points out, it is the opposite of this situation which usually takes place. Since overhead charges

¹ See GANTT, H. L. *Work, Wages and Profits.*

have remained constant as demand falls, the manufacturer charges all his overhead into the cost of the small output which, let us say, he is producing with 40 per cent. of his equipment; and in consequence the price at which he can offer it with the falling demand is too high to stimulate sales. If, however, a proper cost system is in use, overhead charges are not assessed in this lump-sum manner. They are distributed on a square foot basis, or, as is usually to be preferred, on a machine-hour basis; that is, so much of the total overhead costs as are used by a machine in each hour of its operation are charged to it when it operates. Obviously, machine costs remain nearly the same whether one machine runs or a hundred. And, selling on a basis of actual unit costs, the manufacturer is able to offer more nearly the same price in dull and in good times.

But, it will be said, there is still an extra burden of cost in this situation. True; but that extra burden *is not incurred in the manufacture of the relatively few articles being made in the dull time—articles which it is greatly to the plant's interest to increase the sale of in order to bring it out of its dull season.* This extra burden is in the nature of a general risk of the entire enterprise and should really be figured into final profit-and-loss.

In short, sound methods of cost-keeping will tell unit costs accurately and make it easier than it otherwise would be, to offer goods at a moderate price at a time when only low prices will stimulate sales.

The financial department can also do an educational service to the entire staff by computing and dwelling upon the *high costs of irregular work*; costs of idle equipment, loss of experienced workers who are laid off and do not return, training of new workers, reduced output immediately before and after a lay-off, etc.

With these costs known, it will then be easy for the management to reckon how much more expensive than irregular work with no method of continuing definite relationship with workers when they are laid off, would be a method of annual compensation which assured at least the longer employed workers a regular income. In many firms the difference between the two will be found upon accurate analysis to be surprisingly small.

In short, the problem of regularizing work in so far as it can be solved by the factory, is a problem of intelligent coordination in the efforts of the staff departments. And if the whole executive staff knows and agrees upon the standard volume of produc-

tion for an extended period in advance, the important basic step will have been taken.

Seasonal Fluctuations.—Many of the ways of reducing highly seasonal production have already been discussed. A further possible help is found in those few communities which have brought into the same city factories whose dull seasons offset each other. This assumes, however, that the work of each industry is not so skilled but that it can be readily learned by those who turn from one industry to another.

But the larger seasonal movements of labor, like those of harvest workers, lumber workers, hotel resort workers, require an agency of information, cooperation and assistance to individual workers which no single employer can supply—or should even try to supply. The lengthening of the busy seasons in industries of which these are typical can only go to a certain point; and beyond that the only relief is in the securing of employment in other industries for the remainder of the year. This means two things; shifting of workers from one industry to another; and from one locality to another. Neither of these can be easily done, nor should they be irresponsibly done. Such a process requires protection to workers and to the community at every point. To carry on such a function successfully and on a nation-wide scale, the country must, as we pointed out in discussing sources of labor supply, utilize a universal, non-competitive and free service for the interchange of employment information. Such a service the United States government is alone in a position to render.

Coping with Depressions.—But despite all that the single corporation or the public employment service can do, a period of depression is likely to set in recurrently and make the securing of orders practically impossible. Some firms during such periods resort to a drastic shortening of the week for all; or they offer full time employment one week to one half of their force and the next week to the other half. Such expedients are certainly better than no work and no earnings, but they cannot safely be continued over more than two or three months at the longest. Under-employment is humanly almost as harmful as unemployment. It tends to keep workers tied to half-time employment in one place while full time work might be found elsewhere; it discourages workmanship; it undermines living standards.

Proposals for supplementing the dull times of private business by a vigorous prosecution of public business which would in

part be held in reserve for slack periods, are excellent as far as they go. It is always true that the more people who have profitable employment, the more likely is a normal volume of total demand to be maintained. And if city, county, state and nation were to adopt a policy of reserving 10 per cent. to 20 per cent. of each year's purchases and new projects to be started when a depression seemed imminent some relief would be afforded.¹ But this leaves the central problem still untouched.

The Organization of Demand.—The central problem is to secure the operation of industry on the basis of a response to known needs. And obvious as the remark may seem it is well to remember that people's *needs are really a very constant quantity*—or rather a gradually and constantly increasing quantity. One of the causes, if not the central cause, of depressions is that in successful years everybody's confidence in the future is unbounded; every manufacturer believes that he can sell more than he ever has sold; and he manufactures more. In this process a larger total production naturally materializes than can be sold at a price which will bring a profit; and a note of caution and conservatism is struck. The bankers who have advanced the credits for the whole inflation see that returns are slowing down; they begin to call in notes which cannot be met at once because sales have not occurred; and thus begins a process of sudden retrenchment which culminates in a depression.

In the course of such a business cycle, which has in this country been traversed fairly regularly every seven years in the last half century, one of the conspicuous things that happens is that each individual competing plant loses sight of the total real demand, or imagines that it can capture a larger proportion of the demand than it ever did before. The total demand, even if known, is not related to the producing capacity of an entire industry; but more often the demand is not known—is only crudely estimated by competing estimators, *i.e.*, sales managers, who make it their business less to face the facts than to face those facts which their corporations want to hear. Thus, organization of the demand, in this sense of knowing what the market can absorb out of the total possible producing power of an industry, and of *seeing to it that this total marketable quantity is not grossly overproduced, is impossible in an industry when each corporation is a law unto itself.* Organization of demand requires organization among the several producing and selling agencies of an

¹ WEBB, SIDNEY and BEATRICE. *The Prevention of Destitution.*

industry. And society has a right to hope that as each industry rather than each factory comes to be conceived as the unit of production, the amount produced will be more accurately related to demand than is now possible; and business cycles will tend to disappear.

There are, therefore, certain important steps toward regularization which an industry as a whole is alone in a position to undertake. What such an organization may be and how it would function in relation to organized employers and organized workers, we shall discuss in the chapter on national industrial councils.

An industry in its organized capacity can, moreover, help materially to organize its own employment market.¹ It can in its several localities draw from a common labor supply, rather than let each plant try to keep enough "hangers on" to help it through a busy season. It can by its organized efforts reduce the most acute forms of seasonality by controlling within reasonable limits the introduction and changing of styles. It can encourage standardization of products and parts.

And there are other things that it might do, which under our anti-trusts laws are probably at present illegal; but which under proper regulation (assuming a modification of these laws) would help to steady work. Producers in different parts of the country could, for example, divide up the markets of the country in cases where that would help. They might agree to divide up rush business and business beyond the capacity of their plants. By sub-contracting orders beyond plant capacity or turning customers over to other firms, corporations would be kept from the temptation of building new equipment for which there would only be sporadic use. The total producing capacity of all the plants in many of our industries, if they were simultaneously operating, would probably already overproduce the present "effective demand." And if the truth of this could be only brought home to employers, workers and consumers alike, steps in the direction of a more intelligent utilization of plant might be undertaken.

Finally, an industry can, as previously pointed out, distribute the risk of irregular work in a way that the single factory cannot.

¹ For a more extended discussion of this point see, TEAD, ORDWAY, *The United States Employment Service and the Prevention of Unemployment, American Labor Legislation Review*, March, 1919.

Compensation to involuntarily idle workers out of a special reserve fund is the last resort. Whether this shall take the form of insurance, an annual salary or some other method, is less important to consider here than is the fact that the maintenance of idle workers when no work is at hand is just as important—and therefore just as justifiable—as the practice of maintaining equipment or of drawing on surpluses for dividends in periods when none are earned. *Property can outlast the suspension of payment for its use; human beings cannot outlive suspension of their livelihood beyond a few weeks.*

Organization of a cooperative character between workers and employers of each industry is thus seen to be vitally necessary before regularization becomes at all complete. For regular work is the outcome of regular demand. And demand is not known until there is one unified, widespread agency in each industry for ascertaining it.

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CHAPTER XXVIII

PRINCIPLES OF SHOP COMMITTEE ORGANIZATION

The war had the effect of accelerating group relations between managers and their workers. Representative action in the discussion and determination of shop policies and procedure increased significantly. The necessity of uninterrupted production encouraged employers and especially the Government to assure some channel of free communication between the parties so that strikes and high labor turnover might be avoided. And the result was an unprecedented extension of the use of shop committees and collective bargaining.

The idea that committee action might reduce ill-will and friction had been comparatively untried in American plants before the war. And it was only in an almost frantic resort to every possible expedient that committee action got its trial. Happily, and somewhat to their surprise, many managers were pleased with the results, and would not now abandon the new methods of joint dealing.

Nevertheless, as a procedure for general application the movement for employee representation, or the shop committee movement, is still in the experimental stages. Seventy-five per cent. of the plans now operating are less than three years old; and thirty per cent. are less than one year old. It is, therefore, too early to discuss the success of the movement with any great array of evidence. But it is profitable to consider the reasons for this movement; the different types of employee organizations; their relative merits from the point of view of effective business values and the draw-backs as thus far revealed.

The Reasons for Shop Committees.—The motives which have led employers to study and put into operation shop committees are naturally numerous and often mixed. The dominant aims may, however, be divided into those which are negative and those which are positive.

The principal negative motive is fear—fear of the action of trade unions. The claim is frequently voiced that “if I give my

workers a voice in controlling conditions in our shop, there will be no place for any outside organization." The idea is to anticipate the union organizer, to create an intra-plant "collective bargain," "to deal only with my own men." It is the honest conviction of many employers that they can not only preclude union action by some sort of committee action, but that they can deal more satisfactorily with their own workers in the absence of all outside interference.

Of the positive motives there are several,—some which stress the production arguments, some the human. One of the frequent causes of employers' interest in the committee movement is the desire "to get production on a better basis." Indeed, there is a danger that employers who are handicapped by old plants, worn-out equipment or inadequate methods of control and superintendence, will try to make shop committees responsible for the correction of short-comings which in reality the management should remedy. Casting about for "a solution of the labor problem" which will save them the hard work of competent management, some employers have seized with more enthusiasm than discretion upon shop committees

Other companies have seen more clearly that there is a psychological connection between representation in shop affairs and interest in work. They know that the experience of some plants where workers have conferred on production problems has been decidedly beneficial to production and to morale.¹

Far-sighted industrial leaders are also finding in the committee movement an educational medium of great value. They realize that employees, if they are to take interest, assume responsibility, display initiative and share further in industrial control, must know the inner workings of industry and must know how to act in executive capacities,—or at least know how to advise with those in executive positions as to what the administration should be. And they see in any form of group action which gives employees in some organized way a knowledge of management and a chance to deliberate with the management, great educational possibilities. Employee representation can, they believe, be the cradle of industrial democracy, as the town meeting was of political democracy.

The purpose of better human relations is in one sense an educational purpose—instructive to both management and men in a

¹ See Chapter XV.

point of view which makes for cordial dealings. If it is true that certain interests of the men diverge from those of management, there is no reason why a consideration of those divergences cannot be carried on amicably, or why a working arrangement cannot be reached in conference, which will be to the temporary satisfaction of all concerned. And unquestionably the most reliable way to maintain this atmosphere of personal good-feeling is the method of direct, face-to-face discussion.

Moreover, since at least half of the matters which both sides are interested to see well administered are matters of undeniably common interest, there is ground here also for the cultivation of mutual understanding and personal amiability. Managers should bear in mind that industrial differences—except those arising out of personal quarrels with foremen—are *essentially impersonal in nature*; and they can be kept so *if only the parties involved know each other sufficiently well in a personal sort of way*. In the cultivation of this personal intimacy it is the management which must necessarily take the first step; so that if any element of personal acrimony enters into a consideration of differences between it and the workers, it is in part at least the management which is to blame. Committee action can admirably serve this purpose of establishing personal contact if only it is properly directed and guided.

The first article in the constitution of one shop committee plan well describes this primary purpose when it declares that the plan aims “to establish relations upon a definite and durable basis of mutual understanding and confidence. To this end the Employees and the Management shall have equal representation in the consideration of all questions of policy. . . .”¹

There is another penetrating purpose of those companies which realize that individual dealings between a large corporation and each of its workers is today an anachronism; and realize that it involves a great inequality of bargaining power and therefore is bound sooner or later to give rise to a feeling of unjust treatment on the part of the workers. Such companies realize that “the goodwill of labor is a collective goodwill”—that is, that the sense of fair and cordial dealing is secured only when dealings are with the workers as an organized group. And Professor Commons

¹ Harvester Industrial Council (pamphlet), March 10, 1919; a plan which is carefully thought through in all its details. It will repay thoughtful study.

offers as the reason for this, the fact which most progressive employers are already prepared to concede, that "the employer always speaks as a representative of organized capital. Unless the laborer can speak as a representative of associated laborers, he cannot speak with equal power."¹

Another thoughtful student in asking why so little progress has been made in fostering cooperation says, "A reason for this situation is found in the lack of understanding on the part of industrial executives that to build *morale* or the *spirit of the organization*, their working people must be appealed to in the mass and not as individuals."² Whether or not intra-plant committee action can provide equality of bargaining is a question which will have to be considered presently in discussing the values and short-comings of the committee movement. We are here only stating the fact that certain employers believe that equal bargaining power can be so achieved.

Types of Employees' Organizations.—There are from the point of view of structure three distinct types of employee organizations which are being introduced today:

1. The plans of *joint action* of managements and their own employees on councils, committees, conferences, assemblies, etc. In this volume all such plans will be spoken of as shop committee plans or as works committee plans—the two terms being used interchangeably.³

2. The plan of an employees' association, "cooperative association," or "brotherhood" in which all employees are usually included. We shall designate this plan in our discussion as the "employees' association" plan.

3. The so-called "federal plan" which proposes for each factory a structure analogous to that of our Federal government—with a cabinet of executives, a senate of foremen and a house of representatives composed of departmental delegates.⁴

¹ COMMONS, JOHN R. *Industrial Goodwill*, p. 48.

² ALFORD, L. P. *The Status of Industrial Relations*. (In *Industrial Management*, July, 1919.)

³ None of these definitions are offered as either representative of universal usage or as necessarily the best possible usage. They are simply the terms with which we here agree to designate certain types of organization.

⁴ In order that there may be no confusion we cite below examples of each type:

1. International Harvester Company.
General Electric Company, Lynn, Mass. and Pittsfield, Mass.
Midvale Steel Company.

A distinguishing feature of all three types of organization is that without any exception which has yet come to our attention the management has thus far taken the initiative in getting these plans under way. This fact, of course, helps to separate them from what is usually spoken of as "collective bargaining," where the workers are affiliated with a trade or labor organization including employees of other companies in its membership, and where the formal agreement, if any exists, is made by the employer with that organization usually upon its initiative. We shall for the purposes of this volume use the term "collective bargaining" to characterize this last-mentioned type of joint relation—*i.e.*, an agreement with an organization of workers which includes in its membership others than those in the employ of one corporation.

General Principles Underlying All Employees' Organizations.—Up to a certain point the problems of adopting and administering shop committees and employees' associations are the same; certain principles of procedure are common to both.

The first principle—the one which should preface every discussion of method—is that the best forms, methods and machinery known are of little avail if they are not animated by a *sincere, genuine and liberal intention*. "That which attaches people to us," said Matthew Arnold, "is the spirit we are of and not the machinery we employ." Similarly, a present-day student of industry well says:

"I believe that the application of right principles never fails to effect right relations; 'that the letter killeth but the spirit giveth life'; that forms are wholly secondary, while attitude and spirit are all-important; and that only as the parties in industry are animated by the spirit of fair play, justice to all and brotherhood, will any plan which they mutually work out succeed."¹

In other words, there is little use for dogmatism in discussing plans of structure. We need rather to consider at first the out-

¹ ROCKEFELLER, JOHN D., JR., Representation in Industry, address at Atlantic City, Dec. 5, 1918.

2. Wm. Filene Sons Company.
Interborough Rapid Transit Company.
Morse Dry-Dock and Repair Company.
3. Sidney Blumenthal Company.
John David Sons and Company.
William Demuth and Company.
Printz-Biederman Company.

standing points of approach which will help to give tangible evidence of a sincere spirit—assuming, of course, that a sincere and liberal purpose is present.

Perhaps the surest way to evidence this right spirit is to have it clearly understood from the start, implicitly and explicitly, that this is not a trade union defeatist move. The following paragraphs from an English source apply with equal force in our country, especially since the American Federation of Labor went on record in its 1919 convention as opposed to “company unions.”

“We think it important to state that the success of the works committees would be very seriously interfered with if the idea existed that such committees were used, or likely to be used, by employers in opposition to trade unionism. It is strongly felt that the setting up of works committees without the cooperation of the trade unions and the employers’ associations in the trade or branch of trade concerned would stand in the way of the improved industrial relationships which in these reports we are endeavoring to further.

“In an industry where the workpeople are unorganized, there is a danger that works committees may be used, or thought to be used, in opposition to trade unionism. It is important that such fears should be guarded against in the initiation of any scheme. We look upon successful works committees as the broad base of the industrial structure which we have recommended, and as the means of enlisting the interest of the workers in the success both of the industry to which they are attached and of the workshop or factory where so much of their life is spent. These committees should not, in constitution or methods of working, discourage trade organizations.”¹

A second essential step in giving evidence of the right spirit is to have the employees *consider with the management from the start, what the plan shall be*. Their interest, their belief in the management’s good intention, their sense of the satisfactoriness of the finished plan,—will all be greatly enhanced if the management takes it up with them before any plan whatsoever is put on paper. In an address concerning the adoption of the Harvester Industrial Council, Mr. Cyrus McCormick, Jr., said on this point:

“So pleased are we with the operation of this plan that the only thing I can say about it is that if we had to do it all over again—and I advise

¹ See reprint of Whitley Report in *The Industrial Council Plan of Great Britain*, compiled by the Bureau of Industrial Research, New York, p. 34.

those who follow to take this lesson from us—we would not devise a plan and then ask a workingman if he desired to accept it, but we would begin by asking him if he wanted a plan of ‘industrial democracy,’ and if he replied affirmatively, we would ask him to come in and help devise a plan with us.”

Similarly, another firm faced with the question of how to “put it up to the men” tells of the following conclusion voiced by an influential executive:

“Why not be frank?” he said. “Why not call a mass meeting of the employees, for example, half an hour before closing time, and place the whole matter before them just as it is? . . . Tell them that you do not want to ‘put anything over,’ and that you want them to select a committee in their own way to discuss it with you, a union or non-union committee—any kind of a committee so long as it is fairly representative. Put all your cards on the table. Ask them to put theirs down, too.

“Well, the directors took my advice, and I am glad to report that it succeeded.”¹

We agree with these conclusions with the important qualification that there will be factories where, usually because of long traditions of managerial autocracy, the employees will not express (and indeed not even be conscious of) any desire for “industrial democracy.” In such cases the complacency, or rather hyperdeveloped submissiveness of the workers, will have to be modified before any plan of employee representation will succeed.

John Stuart Mill, whose essay on “Representative Government” should be read by every manager who is considering the institution of employee organizations, says relevantly to such a situation of passive acquiescence:

“It is also to be borne in mind that political machinery does not act of itself. As it is first made, so it has to be worked, by men, and even by ordinary men It needs, not their simple acquiescence, but their active participation; and must be adjusted to the capacities and qualities of such men as are available. This implies three conditions. The people for whom the form of government is intended must be willing to accept it; or at least not so unwilling, as to oppose an insurmountable obstacle to its establishment. They must be willing and able to do what is necessary to keep it standing. And they must be willing and able to do what it requires of them to enable it to fulfill its purposes.”

¹ STODDARD, W. L. Installing a Shop Committee System. (In *The Survey*, July 12, 1919.)

Preliminary educational work of a personal sort among the employees or the leaders of employees is indispensable to a sound beginning of shop committees. "A people," says Mill later in the same essay, "may be unprepared for good institutions; but to kindle a desire for them is a necessary part of the preparation." Discussion among workers can profitably be started as to the need for a plan, the best procedure, ways and means of securing an understanding adoption of it. Among employment administrators agreement upon this principle is universal; there must be painstaking personal educational work prior to the proposing of the idea of employee representation and prior to the adoption of the proposed plan. Such personal conference takes time. Hence the next principle, which relates to the administrative oversight of employee organizations.

The administration of all work incident to the adoption of employee representation should be placed with the personnel executive; and he and his staff should take time enough to do the necessary follow-up work at every point. And after the plan is in operation there is imperative need for some managerial leadership, or at least for some one in the management to have direction over the management's part in the plan;¹ and this person should be someone from the personnel executive's office.

The plan should be put into writing for final action; and this written plan should (so far as shop committees are concerned) make provisions to cover the items discussed in the next chapter. This plan after it has been favorably acted on by management and men, will then be in effect the working constitution of the plant. Matters likely to require frequent change, such as hours, rates of pay and other details of terms of employment, should preferably not be included in the constitution. They should, of course, be definitely formulated and agreed to; but they correspond more to statutes and ordinances than to "organic law."

The permanence of employees' interest in the plan is likely to be in proportion to the degree of responsibility exercised by them; and in proportion to the amount of authority vested in the representative bodies created. This principle seems to us to argue in favor of joint bodies on which both sides are equally repre-

¹ This is so far recognized in most of the plans that they specifically provide for a separate staff department, usually the Personnel Department, to handle the administration of the plan.

sented. For under such conditions of joint participation a considerable measure of both responsibility and authority can be safely exercised by the committees at an early date after their creation.

There is some question as to how detailed the statement of responsibilities and the grant of authority should be. If a specific understanding on these matters can be agreed to by both sides when the plan is under consideration, that simplifies the immediate problem. But to raise at the outset question as to how far the plan is to go in turning over problems for the employees to consider and solve, may raise issues which can be more satisfactorily met when the plan has been in operation for a time.

However, some of the best shop committee plans provide from the start that *all matters of mutual interest* may properly be considered by the employees' bodies. And such a provision can usually be introduced to advantage, if the management is prepared to go that far. For it will in general be found true that employees only call attention to and demand consideration of problems which they think affect them; and that *they ask to exercise authority only when they are close to the point where they are able to exercise it*. This last statement is open to exceptions; but the history of the rise of all groups to self-government tends to bear it out.

There is another point which those managers who want to "get employees to take the whole responsibility for production off my hands," should especially note. Representative bodies by the nature of their structure and their function should *not* be administrative bodies. An administrative body may be representative—as, for example, a plant's operating committee may include representatives of plant, process, personnel, etc., etc., in which case each member of the body, *as an individual*, has certain administrative duties. But a representative body has always been conceived by discriminating students as of a different essence.

Indeed the following legend might well be written in letters of gold on the walls of every room where shop committees meet:

"The proper duty of a representative assembly in regard to matters of administration is not to decide them by its own vote, but to take care that the persons who have to decide them shall be the proper persons." "Instead of the function of govern-

ing, for which it is radically unfit, the proper office of a representative assembly is to watch and control the government, to throw the light of publicity on its acts; to compel a full exposition and justification of all of them which anyone considers questionable. . . ."¹

There is a tendency all too frequently met in new shop committee plans to turn over certain administrative matters to committees. But such committees if without competent leadership are apt to display a greater capacity for talk than for action. Every committee must look to some one or another of its members *to do the work*. "No body of men, unless organized and under command, is fit for action in the proper sense." *The executive task which a committee can effectively exercise is the choice of the individuals on the committee who are to do certain parts of the job turned over to the committee.* People are in the habit of lamenting over the inefficiency of representative institutions, and of attributing their inefficiency to the fact of representation. More accurately we should say that the inefficiency is frequently due to applying the principle of representation *in the wrong place*. The following caution is thus in special need of emphasis:

"Nothing" says Mill at the end of the chapter just quoted, "but the restriction of the function of representative bodies within these rational limits, will enable the benefits of popular control to be enjoyed in conjunction with the no less important requisites (growing ever more important as human affairs increase in scale and in complexity) of skilled legislation and administration."

Finally, the company which starts a shop committee should be prepared to go whither the way leads. Nothing has tended so effectually in times past to discredit all forms of "management sharing" with employees, as their experience of having employers abandon experiments as soon as they felt that "matters were getting beyond our control." The management of every corporation venturing into this field should ask itself: "Are we prepared to relinquish any of our control and authority in any direction?" Is the company's desire to assure a square deal

¹See Mill, J. S. Considerations on Representative Government, Chapter V on The Proper Functions of Representative Bodies, which is a gem of penetrating analysis—all of which is applicable to the problem of industrial government.

with its men *as the company sees it*, and to see justice done *as the company senses justice*; or is it prepared to give up "exclusive control over wages, hours and shop discipline?"¹ "Only," continues Mr. Leiserson in speaking of the employer, "when he is ready to administer justice to his employees as they understand justice, only when he is ready to give them veto power on his acts and to assure trial by their peers, a jury of fellow-employees, should an employer inaugurate an employee-representative plan."

Whether or not one agrees with this conclusion, it is important for the employer to realize that he is calling into being agencies which may carry him far. For he is giving opportunities for expression to impulses of self-direction, leadership and assertiveness in his workers, which will not stop displaying themselves at some point which the employer has arbitrarily set in his own mind.

These, then, are the general problems of policy, purpose and principle which managers should consider at the outset. And if, after due consideration, their decision is still in favor of working with their employees through committees, it is next important for them to decide the matters which should be included in the written constitution of the plan.

¹This and the following quotations are from LEISELSON, W. M. *Employment Management, Employee Representation and Industrial Democracy, Proceedings National Association of Employment Managers, 1919*, pp. 118-124.

Selected References

(See end of following Chapter.)

CHAPTER XXIX

METHODS OF SHOP COMMITTEE ORGANIZATION

There are certain items which require statement or definition in any formulated plan of employee representation which is to meet the test of actual use. The present enumeration aims to cover those items included in the best plans now in operation. We are not prepared to say that all of them are necessary in every plan. But they form, as they stand, a fairly complete list from which a choice, governed by local conditions, can be made.

Provisions of a Good Plan.—(a) *Purpose.*—The preambles of a number of the plans furnish a statement of purpose of which the following is typical:

“The Employees and Management undertake by the adoption of this plan of an Industrial Council to establish these relations upon a definite and durable basis of mutual understanding and confidence.”¹

(b) *Definition of Employee.*²—This section defines who can vote and hold office; usually it confines this privilege to those *below* the rank of assistant foreman. Also there is a provision in some plans for no discrimination against employees for trade union membership.

(c) *Right to Vote.*—Only employees as defined in (b) may vote; with provision in some cases for a minimum age limit and minimum length of employment (usually two or three months). Both provisions seem to us reasonable and sound.

(d) *Right to Hold Office.*—The right to hold office is usually limited by requiring a previous period of employment (a year is used in some of the best plans); by requiring a minimum age (of twenty years). In some cases there is the further requirement of American citizenship; or of literacy in the English language. It seems to us that although the second of these requirements is

¹ Harvester Industrial Council, (pamphlet), March 10, 1919.

² For careful comparative analysis of the provisions of twenty plans, see American Company Shop Committee Plans, by Bureau of Industrial Research, New York, 1919.

presumably included in the first, it is under present conditions a more relevant and reasonable requirement than the first.¹

(e) *Basis of Representation.*—Practically all plans provide for department representation on the central shop or works committee, with each department selecting its own delegate. The number of delegates from each department depends on the size of the department, the nature of the plan, the number of departments and the total number of employees. In a plant with 1000 employees, fairly equally distributed among the departments, it would seem that one representative per department would usually assure adequate representation. The idea of having one delegate to every 100 employees or major fraction may, however, be usefully applied in a large department and in large plants.

The important end to achieve under any condition is that one delegate speaks for only as many people as he can have convenient access to. If the number of this constituency goes over 100 (which is too many in small plants), his voice is in danger of not being fairly representative. Reconciled with this object should be the purpose of keeping the *central* committee as small in size as is consistent with adequate representation. This body should not have more than 40 or less than 12 members; and the smaller it is, the more effective its deliberations will be.

Where, as is sometimes the case, there are several crafts in the shop, whose members belong to craft unions and desire representation on a craft as well as a departmental basis, there is much to be said for electing at large one or more delegates from each unionized group. For example, in a cotton mill in which the weavers and loom-fixers were strongly organized there might be nominated from these two union groups two candidates for each union to be voted on by the employees in the regular shop committee election. In this way there would be on the committee one delegate expressly representing each unionized group.

In some plants even in the absence of unions, a craft basis of

¹ Judge Samuel Alschuler in the Chicago packing house wage arbitration said on August 14, 1919, that in employing workers discrimination against non-citizens was most inadvisable. He pointed out that such discrimination might lead to international complications since "the Government supervised immigration and such foreign citizens as had come to this country were entitled to equal opportunities with American citizens."—*New York Times*, August 16, 1919.

representation may be more equitable than a departmental basis. Or a combination of both bases may be used.

Where women are in the majority in a department, it will usually be well for a woman to represent the department, although if this can be achieved without special statutory provision it is more desirable. But if women are in a minority in several departments it may be well to have a number of women delegates, elected by the women at large, the total number to be determined on a basis of the number of employees per delegate that there are in a majority of the departments.

In addition to the works committee, however, there should be a company council in all large corporations which have several plants, and which desire to call together representatives from the entire corporation. On such a council there should be at least two employee delegates from each plant; although a representation based on the number in the plant (one delegate to a given number of workers) may also be used.

(f) *Representation of Management.*—On the central works committee the management should appoint a number of executives to represent it, equal in number to the workers' group. At least a fourth of the management delegates *should be foremen* in order to assure them an active place on this body.

(g) *Method of Nomination.*—The important thing here is to make everyone feel that nomination is easily available for any candidate desired by any group, however small. Nominations should be held several days before the election; a week seems to us a reasonable time. They will be most satisfactory if a blank ballot is used and the voter writes the names of his nominees. The number of nominees declared nominated can be two (or three) times the number to be elected.

The officials who are to supervise the balloting both for nominations and elections should be a joint committee equally representing management and men.

(h) *Method of Election.*—Nominations should be posted for several days before elections. There should be provided a place for the election which is convenient and free "from undue influence," and a definite time during which all can have access to the polls, and a secret ballot. Results of elections should be posted promptly and the names of the elected delegates should be permanently posted in the department, so that all new employees will know through whom to act if difficulties occur.

The term of office should be six months or preferably a year; and the elections of the several departments should be so arranged that half the representatives retire at one election and half at the next. The value of this continuity of experienced membership is great.

There should be no restriction against re-election of the same individual.

Provision should be made for a special election in the event of an employee representative leaving the employ of the company.

(i) *Recall*.—It should be possible to recall an undesirable representative without too great effort. A good provision is to require a petition of recall from a third of the voters of a department, and a majority vote on the recall itself.

(j) *Composition of Committees*.—The company council works committees and standing committees should, as already suggested, be equally representative of both sides. But there should be no restriction upon separate meetings of employees alone.

It will often be found efficient in large plants to have an executive committee of the works committee, which shall really be the steering committee.

Much of the actual work of shop committees will be done more thoroughly if there are subsidiary standing committees. These may either be named in the plan, or preferably be created from time to time as the need arises. To list at the start a number of special committees over matters in which little interest exists at the time, is to pile up too cumbersome a structure. These committees from the very nature of their work should be joint committees appointed by the works committee. But it will be well to make membership on them possible for others than members of the works committee. The job analysis committee and the wage rate committee might well fit into the committee scheme at this point.¹

It is important to have the terms of reference of matters to special committees clear—and a time limit set in which to report back. Especially where grievances are under consideration, time is the essence of the difficulty and promptness should be kept always in view.

(k) *The Conduct of Meetings*.—Meetings of works committees should be held at least monthly, and provision should exist for the calling of special meetings in the interval if the occasion demands.

¹ See Chapters XIX and XXIII.

Meetings should be held on company time, preferably in the late afternoon; and employees should be reimbursed at their usual rate for time lost from work.

The costs incident to meetings should be met by the company. And a place for holding the meetings should be provided by the company.

The chairman of the works committee should be selected by that committee. The device of having each side choose a chairman and having them preside at alternate meetings is sometimes used. The use of the personnel manager of the company as committee chairman, seems to us to be only desirable if this is definitely urged by the employees and if this executive is of broad enough gauge to see all around the problems which come up. We incline to the view that this executive can perform a greater service to all parties by simply being one of the management representatives on the committee.

In the case of the company council, the chairman may without impropriety be the president of the corporation; in which event he should have no vote.

(l) *Method of Voting.*—Two broadly different methods of voting on committees are in use: The majority vote of each side taken in separate caucus recorded either as one vote or as the actual number of votes; and the majority vote of the whole committee. The reasons urged for the second method seem to us on the whole to outweigh those against it.

Many of the questions which shop committees act upon do not raise sharply issues concerning the divergent interests of managers and men; and even when those divergent interests do have to receive attention, a proper committee procedure can assure a fair consideration, especially when the chance for appeal exists. In other words, it is desirable to get a judgment based on the sum of individual convictions, on the assumption that every committee member wants to see the right thing done. A simple majority vote, however, will not be of greatest value, since on all shop questions it is desirable to establish in advance an approximate unanimity of opinion. We favor a two-thirds or even if possible a three-fourths vote as necessary to pass any decision. In this way prior agreement upon a course of action helps to assure its faithful carrying out by all.

(m) *Referendum.*—Some more or less organized method is needed to assure that workers are endorsing, supporting and-

aware of the activities of their delegates. Nothing will be more fatal to a plan of representation than to have the workers continually repudiating the decisions of their representatives.

In any case the minutes or decisions of the meetings of the works committee should be printed or mimeographed and made available for all employees. On matters of special urgency, a referendum might well occur at the discretion of a two-thirds vote of the works committee. And delegates should be urged both to report at informal noon departmental meetings back to the workers and thus to get their expression on matters still pending.

(n) *Arbitration*.—There should be a defined line of appeal for all controversial matters which cannot be settled in the department or in the works committee, as the case may be. *This line of appeal should not end with any official of the company.* It should end with arbitration, which can usually be arranged by providing an arbitration committee of three; one from the management, one from the men, these two to pick a third, outside individual.

(o) *Discharge*.—Between the Scylla of no arbitration and the Charybdis of non-agreement on causes for discharge, certain shop organization plans are in a precarious position. *Resort to an outside arbitrator and a clearly defined list of jointly agreed causes for discharge* are essential conditions of a plan which is safe and fair to both sides. Some of the plans have such a list of causes of discharge, but the list is so formidable that one surmises that the acquiescence of the workers was only nominal. The better way is to provide in the plan that a number of causes for which discharge without notice will be held to be fair, will be decided on subsequently by the works committee. Even in these cases, however, the ordinary line of appeal should be available for the discharged worker who believes he is aggrieved; the review in such a case to be on the facts.

In order to give the delegates every assurance against discrimination because of their activities on committees, some plans provide an appeal directly to the president of the company if such representative feels himself aggrieved. This is an excellent provision, since by virtue of its presence in writing it reduces the likelihood of such discrimination taking place.

(p) *Adoption*.—The plan as finally intended for operation should be submitted in writing to the employees. It should be accepted by at least a two-thirds vote of the employees, taken

not less than a week after the plan is submitted for their consideration.

(q) *Amendment.*—Provision for amendment of the plan should not be too rigid. A two-thirds vote of the works committee at the first meeting after an amendment has been proposed and posted on the department bulletin boards, is a reasonable condition.

(r) *Termination.*—It should be provided that the plan is terminable only on six months' notice by a majority vote of the employees of the company, or of the Board of Directors.

(s) *Enabling Clause.*—It should be clearly understood, once a course of action is decided upon, where the responsibility rests for its execution. Unless such responsibility is specifically delegated to some special group, it would usually devolve upon the management to carry out the decisions. This will be especially true where such decisions involve production policies. It is, therefore, desirable to insert in the plan a clause to the effect that:

“The works committee shall be concerned primarily with the shaping of policies. When the policy of the company as to any of these matters has been determined upon, its execution shall remain with the management, but the manner of that execution may at any time be a subject for the consideration of the works committee.”

(t) *The Right to Facts.*—Provision should also be clearly made that when the works committee is asked to deliberate and decide upon a matter, *it shall have access to the facts necessary to an intelligent decision.* Unless such a provision is made, it may be difficult to persuade certain executives that they should make information available. One of the first conditions of successful employee representation is that committees shall have access to existing facts on relevant matters. This suggests the need of an agency for procuring data and thoroughly investigating moot problems. The research division of the personnel department can well be this agency.

The Technique of Committee Action.—To assure successful operation of employee representation it is necessary that all committee action proceed in an effective way. The importance of understanding the technique of committee work, therefore, warrants us in laying down a few simple rules born of experience. These rules apply to all committee action, but are especially im-

portant for special standing committees which are always in danger of wasting time by futile and discursive argument and by indecisive and foggy deliberations.

A cardinal principle in group action is to have the size of the group adapted to the function which it is to perform. The usual function of committees is deliberation in common, with the object of deciding upon some policy or course of action to be pursued. A meeting of minds must, in order to eventuate in action, become a reasonable harmony of minds on the matter in hand. This desirable end argues for having deliberative bodies small, a dozen at the most and preferably five or six people.

But though they be small, committees should give voice to the different interests involved. The case for joint committees on matters of any importance is a strong one, since it provides at every step for a hearing from those who have different points of view about a problem of mutual concern. And these points of view must be reconciled if mutually satisfactory action is to take place.

In addition to being small and representative, committees should be informed. Members should be selected because of their interest in and special knowledge of the subject in hand; and committees should have access to the data needed as the basis for wise decision.

This need of data points to the need of leadership and oversight over committee work. The personnel department should perform this necessary supervisory labor. This supervision involves several things.

Meetings should, for example, be called often enough to keep members interested.

Meetings should not, however, be called unless there is some business to transact. (This does not apply to works committees which should meet monthly and consider matters which will frequently come up at the meeting itself.)

Meetings should be planned by making out the agenda of topics in advance, and preferably notifying members of the agenda.

Chairmen should be coached in ways of drawing out the different points of view and of shutting off discussion which wanders too far afield.

As said above, work assigned to committees should be clearly specified and a time limit set for reporting back.

Also, it should always be remembered that if a committee is made responsible for the execution of anything (operating a lunch room, running a dance or a suggestion system, etc.) the work of execution has to be done by some specified individual.

Finally, there is a tendency to put upon committees tasks which require elaborate study—such as a survey of the local cost of living, comparative wage rates, etc. If committees are to be asked to do such work, they should be provided with the time and the necessary expert assistance to do their work properly.

In short, the secret of the successful use of committees is to conduct them as an educational force with an educational motive. Committees of workers are in reality conferences of people who are learning how to carry on their own affairs. If this fact is borne constantly in mind, and if the personnel administrator is at pains always to provide these groups with relevant subject-matter, committee action can be a fruitful source of personal development and of group morale. Mr. Graham Wallas puts his conclusion mildly when he says, it is “my impression that business organization might often gain on its intellectual side by the wider adoption of means for concerted discussion, and by a close examination of the method by which those who work in a small section of the business can be induced or empowered to think about the business as a whole.”¹

The Benefits from Shop Committees.—Clearly, therefore, the educational value of any scheme of employee representation may be primarily urged. “We are finding,” says one of the high executives of the International Harvester Co., “that the new association with our employees is the best thing in the world, not only for them but for us as well. We are taking advantage of that old saying, ‘Get acquainted with your neighbor—you might like him.’”²

But beyond this general educational value, it can be specifically said that committees are useful because they acquaint both sides with the facts, with the problems which confront the other

¹ WALLAS, G., *The Great Society*. Chapter XI, on *The Organization of Thought* deserves careful study by anyone who desires to see committee action made effective.

² *Proceedings*, National Association of Employment Managers, 1919, p. 139.

side, with the point of view of the other side and with the intentions of the other side. In all of this there is a distinct gain. In the address just quoted, Mr. McCormick cites a case in one of their plants where a group of 100 workers were working seven days a week, twelve and a half hours a day. And the responsible management did not know this until one worker complained to the committee and it was stopped. He also related how a demand for a general wage increase was voluntarily withdrawn as soon as the management showed the books—"the ledgers which before had been regarded as sacred"—and the workers saw the management's problem in the existing financial condition.

Because these activities are educational they provide also a training ground for leadership and responsibility among the workers. All the evidence at hand indicates that if employees know the true facts, they will be as responsible in their decisions as could be desired. Mr. Dale Wolf in recounting his work with a large corporation, gives an interesting (and by no means unique) illustration of how the company when it was faced with a grave slump in demand, called in its workers and gave them a careful statement of the whole market situation. The workers were asked what their suggestions would be under the circumstances and the committee after a canvass of the plant finally decided on a temporary radical reduction of hours for all employed.¹

Responsibility is traditionally sobering; and the fear that "agitators" and hot-heads will stampede the workers into indiscreet decisions is not justified by recent experiences. Indeed if anything, the danger is the other way—that workers will assume responsibility for conditions which can really be laid at the door of inefficient management.

Moreover, the value of employee representation as a stimulus to production is widely testified to. Mr. Leitch's experience is full of such testimony;² and the following citations do not come from isolated cases. "The unexpected and indirect results of our labor policy in increasing efficiency . . . (have) been as profitable and satisfactory as the direct result."³ "Since the introduction of this plan, we have by request of the workers themselves reduced the working hours from 53 to 50 per week,

¹ See WOLF, DALE. Successful Industrial Democracy. (In *Industrial Management*, July, 1919, p. 70.)

² See LEITCH, JOHN. *Man to Man*.

³ Hart, Schaffner & Marx, quoted in WOLFE, A. B., *Works Committees and Joint Industrial Councils*, page 137. This plant, however, combines shop committees with collective bargaining.

with an increased production and increased earnings as the result. . . ."¹

"You may ask why I say that employee representation increases the efficiency of a business. Well, I can't give you statistics, but we see the steady rise of the efficiency of each and every one of our departments."² "Fifty-five per cent. of the factories reported that the plan had stimulated production."³

These citations may not present a true picture of every plant where shop committees function. But they do tend to bear out the conclusion reached earlier in our study that employees' efficiency is determined by their interest, and that interest is secured by some approximation to self-determination in work, chance for the approval of one's fellows, chance for the conscious exercise of fellowship, chance to see some significance in one's labors. Employee representation contributes to all of these ends in one way or another; and thus appears rightly to be one essential step in procuring efficient managerial organization.

It is further true that committee action tends to relieve the management of the consideration of a certain number of relatively minor maladjustments, grievances and complaints which should be handled promptly, at first hand, by those actually implicated. The boast of some executives that "my door is always open to anyone who wants to see me," is well meant. But it points to two real defects. First, it assumes that individual workers will have the initiative and take the risk of "coming out front to raise a row." And, second, it indicates that provision has not been made for handling at the proper place and in a democratic way, complaints that may arise.

Again, it is probably true (although it is yet too early to generalize) that employee representation reduces strikes. It certainly tends to; and has in numerous instances averted them. But the claim, important as it is, must be advanced with caution.

There is another value in employee organization in relation to *esprit de corps*, morale and loyalty. Each of these words connotes something which is essential in every factory if it is to operate harmoniously and productively. Yet each word is used

¹ William Demuth & Co., quoted in WOLFE, A. B., *op. cit.*, page 228.

² International Harvester Co. See *Proceedings*, National Association of Employment Managers, 1919, p. 138.

³ Western Efficiency Society, Questionnaire on Employee Representation in Factory Management.

today in a rather loose way to indicate a desire for the uncritical, passive and complete submission of workers to the desires of management. If this submission is loyalty, it is clear that industry does *not* really want it. That kind of abject obedience is no longer desirable or possible. Committee action of all kinds emphasizes the simple truth that satisfactory relations involve *reciprocal obligations*. In its essence, *joint conference assumes and requires reciprocal responsibilities*—which is, indeed, one of the chief reasons why we stress the joint feature. Joint conference has in it the possibility of creating a consciousness in the management of *its* responsibilities—which is the necessary condition of securing true “company loyalty.” An *esprit de corps* which is to have any permanency must in this day make a sincere appeal to self-respect and personal dignity. And on both sides that sense of self-respect, dignity and reciprocal obligation is fostered by employee participation in shop control.

This idea is well presented in two excellent definitions which are in point here. “Industrial goodwill,” says a careful student of industry, “is not necessarily a virtuous will or a loving will; it is a beneficial reciprocity of wills.” And company loyalty he characterizes as not “gratitude for past favors nor a sense of obligation but an expectation of reciprocity.”¹

“There is a conception going the rounds of industry today that morale is something that can be bought,” says one of the most successful labor administrators in the country; “that it can be picked up from the shelf somewhere and placed where it is desired. . . . But morale is always a result of right thoughts, right actions and wholesome environments.”²

And Robert G. Valentine put the matter plainly but truthfully when he said that “Employers should stop talking about the loyalty of their employees until they are ready to make an equal noise talking about their loyalty to employees.”

Another value of shop committees, less directly economic but destined to carry more and more weight, is the value of experience in political activity which any genuine employee representation scheme affords. It has been well said that “no concern can be allowed to take a worker’s time for eight or nine hours a day without providing opportunity for him to practice actual methods of

¹ COMMONS, J. R. *Industrial Goodwill*, p. 150.

² GRIEVES, W. A. *Proceedings*, National Association of Employment Managers, 1919, p. 84.

government" (R. G. Valentine). We live in a political democracy; yet that democracy can only be made actual if its citizens have the competence and the experience in deciding public issues which comes with practice. And shop committees do provide a certain amount of experience in group activity which has its value for America's political no less than for its industrial future.

Finally, it should be understood that the personal associations between executives and workers, built up in the joint groups, can count for much in helping the company to ride smoothly into negotiations with labor unions if such collective dealings become imminent. If the time has arrived when collective bargaining is seen to be inevitable, it is a mistake to incur ill-will and an alienation of personal understandings with employees by obstinate resistance. Rather is it policy to utilize to the full the cordiality which already exists, to make the transition as amicable, reasonable and mutually satisfactory as possible.

Moreover, there is this important consideration. The activities of a union's business agent in intra-plant affairs are likely to be in proportion to the amount of outside protection which the employees find that they need. If within the plant, agencies exist which reduce friction and minor grievances to a minimum, there is little point in the constant presence of the business agent. And in the long run he has found this freedom from shop quarrels to be as much to his advantage as to the company's, since there are many extra-plant affairs which can better receive his attention.

Shortcomings of Shop Committees.—The reasons advanced by the American Federation of Labor for their opposition to plans of employee representation fostered by employers are by no means applicable to all existing plans; nor are they conclusive since they view the matter from one point of view only. However, their underlying contention has considerable force and must be frankly faced. Their objection is that intra-plant organization does not of itself assure equal bargaining power. The employer in the event of a strike can send goods to other plants to be made; he can get extension of his credits; he can sometimes get the financial support of fellow-employers. The worker under an employee representation plan cannot, if he is dissatisfied with conditions as finally determined under the plan, easily do any of these things. It is difficult for him to move to another job; his grocery bills come due every week; he has no strike benefits coming to him.

The parties are equal under a shop committee only so long as the management does not dissent too strongly from compliance with those demands in which the workers see justice embodied. Once he gives a positive "No" and his workers strike in protest, the employer is economically in the stronger position. This inequality is surely less marked when the workers are affiliated with their fellows in other shops and have an organization with strike benefits and a follow-up to prevent work being diverted into other shops. Question still may arise as to whether there should be equal bargaining power—we shall consider this in Chapter XXXI. But on the assumption (which the A. F. of L. makes) that such equality is desirable, works committees surely do not secure it.

"The employer's goodwill," as someone has said, "is no sound basis for collective action." Yet most of the existing plans depend absolutely on the employer's pleasure for their continuance. "The Lord giveth, the Lord taketh away"—is presumably the philosophy which the employee is to adopt. Other plans provide for possible termination after six months' notice by employees or board of directors. It seems reasonable to conclude, therefore, that there is need for some organization which exists independently of the will of the board of directors—or even of the will of those employees who fail to see the need for organized action and self-protection. There is eventually need for an employees' body acting on its own account and in its own right. This may seem an academic distinction to some; but in reality there is a world of difference between committees which exist on the sufferance of the management and those which are self-initiated and self-perpetuating.

A further aspect of the question of equality in bargaining power is the difficulty of getting sufficiently able representation of the workers' case from among the employees. There is a serious danger that firms which are using their shop committees merely as a "safety-valve," will—to put it plainly—impose upon the ignorance of their employees regarding conditions in the industry as a whole and regarding all the other important factors about which the workers have no first hand knowledge.

Even when no such deliberate intention is present, it will still be true that workers are not always qualified adequately to uphold their end of the argument against a competent manager who knows what he wants. That this is a real danger with the

rapid spread of the committee movement, cannot be too strongly urged. And if executives are found to be discouraged because employees do not adhere to the decisions of their committee-men, we must be sure that such executives are not practicing a mild form of hypnosis on the delegates, and are, therefore, themselves the cause of the breach between the representative and those whom he represents. There is, it may be fairly said, no sufficient assurance in the type of committee plan here being considered, that the employees' side will be presented with sufficient ability, insight and power to warrant adequate and intelligent protection of their interests.

A second shortcoming in the shop committee plan as such, is that there is no organization among the employees of the *shop as a whole*. There is only a representative machinery. Direct democracy in the town meeting sense is indeed impossible in a plant where thousands are employed. But that there is a psychological value in having the representation exist within an organization inclusive of all employees we strongly believe. This idea is developed in the next chapter.

A third shortcoming is to our minds a fundamental one. There will be problems and influences which are of great importance in their effect upon the plant, but which are outside the control of either party in the plant. Yet they are problems which the organized employers or the organized workers, or both together, could to a large extent cope with. Such are problems of purchase of raw stock, foreign selling, technical research, use of harmful processes, uniform cost keeping, etc. If "industrial democracy" is a matter of one factory, it will stand impotent before a thousand exigencies. The employer will plead his helplessness; the facts will show his ineffectuality. But self-government in industry is fundamentally a matter of wider scope and content; indeed to use the term "industrial democracy" in relation to one plant is seriously misleading. For democracy in industry means nothing if it does not mean scientific control over the economic organization of a country (and internationally as well) under the direction of the actual head and hard workers and in the public interest.

We are not, of course, claiming that shop committees are to be criticized for not doing something which by their nature they cannot do. It is rather that we are calling attention to the limit to their function which is rightfully imposed by their restricted make-up. For that limit is in actual practice quickly

reached. What can a joint shop committee do, for example, to offset the results of the unfair competition of another plant which misbrands or adulterates its product; what can be done to prevent a corner in raw materials, or to remedy an absence of cost keeping records by competitors which results in their underbidding a fair price? These are questions vital to the welfare of the management and the employees of any plant; yet they are not met without industry-wide action. The factory committee is competent to deal with factory problems. Only a representative body from the entire industry is ultimately competent to control the really vital factors.

These shortcomings are not, however, of a character to hinder the usefulness of the shop committee *provided its use is confined to those functions which it is competent to exercise*; provided its advocates do not make claims which it is impossible for it to realize; provided it is used not as a substitute for more comprehensive organization in an industry, but as its necessary complement.

Employers' Objections.—The objections to shop committees which were current before the war have lost much of their appeal in the light of recent experience. The objection, for example, that they tend to reduce output is not substantiated by the facts. The objection that they force up wages is certainly not as absolutely true as was supposed.

It is interesting in this connection to see on what matters these bodies do deliberate. Some approximate figures have been supplied by different firms. "We had," says the Bethlehem Steel Company, "ten committee classifications, the first was employment and working conditions. Thirty per cent. of all the 250 cases fell within that scope. Twenty per cent. came within the scope of wages, hours of work, bonus, etc., . . . 10 per cent. under health and works sanitation, 10 per cent. on employes' transportation, 10 per cent. practice methods and economy . . ."¹

The Standard Oil Company of New Jersey out of 119 items taken up in a year found: Wages 38% of the items, working conditions 10%, promotions and discharge 9%, hours 8.5%, methods of wage payment 8%, etc.² The fact is that consideration of the wage rates occupies an important, but by no

¹ LARKIN, J. G. *Proceedings, National Association of Employment Managers, 1919*, p. 125.

² *New York Times*, May 25, 1919.

means a preponderant place, in committee discussions. And far from evidencing a tendency to demand unreasonable increases, all the facts show a disposition on the workers' part to act responsibly *once the financial condition of the company is fully appreciated.*¹

The objection is also advanced that the employees who are selected by their fellows are irresponsible,—are the “loud-talkers” and “agitators.” Here again, experience does not bear out the contention. And even where there is a tendency not to select just the right type of delegate at first, employees find after one election that in any battle of wits, they must choose their best talent to represent them. On this point the Harvester Company testifies to “what a fine type of men the employees have elected as their representatives. . . . the men were of an average age of 37 years, three-quarters of the representatives married, the average employment with the company is over 7 years, and a large number of them own their own home or stock in the company.”²

Similar in character is the objection that employees will not assume responsibility. The evidence already cited would seem to be sufficient proof that this generalization is slightly overdrawn; and that where it is true, the management has not properly reciprocated by assuming its own responsibilities. Macaulay has a few wise words which are especially pertinent in this connection. “Many politicians,” he says, “are in the habit of laying it down as a self-evident proposition that no people ought to be free till they are fit to use their freedom. The maxim is worthy of the fool in the story, who resolved not to go into the water till he had learned to swim. If men are to wait for liberty till they become wise and good in slavery, they may indeed wait forever.”³

The objection that the committee interferes with the management's prerogative to run the business the way it wants to, is a valid one. We have no desire to obscure this fact. The manager who holds that “this is my business, to run as I see fit,” had best leave shop committees alone. But when after experiencing the

¹ See also in this connection the thoughtful statement of the vice-president of the Greenfield Tap and Die Corporation, *Industrial Management*, July, 1919, p. 28.

² McCORMICK, CYRUS, JR. *Proceedings*, National Association of Employment Managers, 1919, p. 138.

³ LORD MACAULAY. Essay on Milton, quoted in *The Nation* (English), July 5, 1919.

workers' decreasing interest in "my business," such a manager concludes that "something must be done," he will do well to consider the utility of some form of employee representation.

Finally, there is the objection that "all this committee business means too much talk and takes too much time." Committee action does take talk and time.¹ All education takes talk and time and executive supervision. There are, of course, degrees of efficiency in committee work, but it is expensive at best. The question is: Is it *more* expensive than the alternatives of non-interest, indifference, and no *esprit de corps*? To this the answer which experience is giving is a fairly decisive negative. And that negative is likely to become even clearer, as soon as managers plan educational and administrative work on a basis of reasonably long time units. The cry for quick results in a matter involving the leveling-up of the intelligence or competency of a large group of people, is born of a failure to face the facts. Factory administration makes headway in the direction of an effective and smooth-running productive organism only as every individual involved is functioning fully and happily. To bring this about is not the work of a day or even a year. "If you would love mankind," observed an English statesman whose life was filled with the toilsome effort of leading representative bodies into ways of wisdom, "you must not expect too much from them."

There are hopeful signs that the use of employee representation will prove a permanent asset for sound shop organization. If

¹ In this connection the following paragraph from MILL's Representative Government" is too pertinent to exclude: "Representative assemblies are often taunted by their enemies with being places of mere talk. . . . There has seldom been more misplaced derision. I know not how a representative assembly can more usefully employ itself than in talk, when the subject of talk is the great public interests of the country, and every sentence of it represents the opinion either of some important body of persons or of an individual in whom some such body have reposed their confidence. . . . Such 'talking' would never be looked upon with disparagement if it were not allowed to stop 'doing;' which it never would, if assemblies knew and acknowledged that talking and discussion are their proper business, while *doing*, as the result of discussion, is the task not of a miscellaneous body, but of individuals specially trained to it; that the fit office of an assembly is to see that those individuals are honestly and intelligently chosen, and to interfere no further with them, except by unlimited latitude of suggestion and criticism, and by applying or withholding the final seal of national assent."

only at every step managers will hold before themselves the educational motive and the principle of functional organization, progress will be assured. The shop committee has an indispensable function. It opens up channels of direct, personal communication between managers and managed. A personal, human contact is established. A vivid sense of participation in a common and socially valuable enterprise is realized. An atmosphere of goodwill and workmanship can thus be created, which is the atmosphere needed to assure true efficiency. And there is valuable training in common action and decentralized responsibility.

But genuine industrial democracy requires the inclusion of activities over a wider radius and circumference. Other functions besides shop representation remain to be provided for. In subsequent chapters we shall consider how the larger issues of industrial relations are today being viewed and handled in a number of industries.

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CHAPTER XXX

EMPLOYEES' ASSOCIATIONS

The fundamental importance of organized relations between the directive force and the manual workers has never been better expressed than by the philosopher who said that "the nature and degree of authority exercised over individuals, the distribution of power, and the conditions of command and obedience are the most powerful of the influences, except their religious beliefs, which make them what they are, and enable them to become what they can be."

And there are in considering employee representation, always two distinct, although not inseparable, aspects to be held in view—the aspect of using the employee organization as an educational medium, and of using it as an arrangement for conducting the "collective affairs of the community in the state of education in which they already are."¹ Unless both are borne in mind and both used as the basis for specific activities, employees' organizations will not make the advances nor show the results which are rightly to be expected of them.

Values of an Employees' Association.—We prefaced our discussion of shop committees by asserting that the form of organization was secondary in importance to the spirit animating its operation. It is nevertheless true that there are better and worse forms for facilitating the expression of a right spirit. One objection already urged to the committee scheme as set forth in the last chapter is that it provides only a representative machinery. It recognizes no formal or organized body politic as the group of primary importance which is represented. There is simply the committee or committees, elected out of the departments or divisions of the shop. There is no organization of the whole—of all the employees of the plant. If we bear in mind that organizations of different size are needed to perform different functions successfully, we shall realize that the function of *willing*, or generating and sustaining enthusiasm, of creating morale is the function of a relatively large body. The employees as a whole

¹ MILL, JOHN STUART. Considerations on Representative Government.

in their organized capacity can perform this function better than any other lesser group. They can become the will-organization of the employees—that is, the body expressing the will and desires of the workers.

Its Structure.—We therefore favor, especially in organizations where the employees number below 5000, the creation of an employees' association or cooperative association. To this association every employee should belong either by virtue of the fact of his employment in the plant, or automatically after he has been employed a given number of months. This association would then become the agent of the workers in all joint dealings and in all employee activities. Its constitution and by-laws would, as was the case with shop committees, be a matter for discussion and adoption by the employees themselves; and obviously many of the principles and specific provisions would be the same in both cases.

Several practical points of difference deserve mention, however. Shall the employees' association include foremen, office workers and executives? In practice the most satisfactory answer to this question has been in the affirmative. It has been found that there is a real value in having all workers of the head and hand in the organization, that it creates a spirit and a sense of working partnership which are beneficial. It will, however, be wise to provide either in writing or in the unwritten understanding of the plan, that the number of foremen and other executives who can hold office at any one time is narrowly limited, or that foremen and other executives are not eligible at all for the higher offices of the association, and that the idea of joint representation on all important committees is adhered to.

Actually, of course, the work of the employees' association will be largely done by its executive committee. This committee (corresponding in structure, function and method of election to the shop committee of the last chapter) should be representative of departments and of management in such a way as to embody the principle of equal and joint representation. And similarly the standing committees on matters of mutual interest and importance should be joint. When, however, it is decided to turn over to the association various employee activities—benefit society, athletics, educational work, lunch room, etc.—the principle of equal, joint composition is less vital.

Not the least useful of the purposes of the employees' organiza-

tion should be to administer any and all of those activities which we characterize as "service features." The desirability of many service features is to be measured not alone by their intrinsic merit but by the extent to which employees are willing to support and help administer them as parts of the employees' association. For example, as between a ball field bought and laid out by the company for the workers, and one bought by the employees' association with money of its own to which the company may or may not have added a contribution, we see much to be preferred in the latter method. And an employees' society creates an instrument for that kind of spontaneous and responsible employee activity which is not so well fostered in any other way.

Difference between Shop Committees and Employees' Association.—It may be said that an employees' association really comes to the same thing in practice as a shop committee—especially if the executive committee of the association is the active body and if actual meetings of the whole association are infrequent and confined to "occasions" rather than business meetings. In a sense this is true; the nominal differences appear greater than the practical. Yet the experience of well-run employees' associations substantiates the conclusion that there is a subtle difference in attitude and in morale which is significant and worth preserving. Employees who belong to an employees' association are not merely "working down at the A. B. factory;" they "belong to the A. B. factory." The existence of an employees' organization capitalizes the fact that there is some industrial body to which each worker belongs; and that organization becomes something personal and intimate if it is dramatized into an employees' association. The worker does not usually feel himself a member of the corporation for which he works; but he can be a member of the association of all its active workers. This forms a psychological point of contact and relationship, which, slight as it may seem from the point of view of committee methods, is genuine and helpful from the point of view of mental methods—methods of securing right attitude and a necessary and legitimate degree of loyalty and cooperation of employees to the enterprise.

Details of Administration.—One or two of the principles laid down regarding shop committees apply with equal force here. An employees' association will not run itself successfully. It may not spontaneously develop the vitality nor the reality to make any

one in the organization take it seriously. It needs leadership. It needs executive supervision and oversight. It needs a full recognition by the management that it is an educational venture. This means that not only a personnel executive should watch over the work of the association, but that in a plant where the number of activities warrant it, an executive secretary should also be employed by the association to direct its work. Preferably this secretary will be in the pay of the association, and will be selected by it.

There should be an outright grant by the management to the association of a given amount annually, which should be written off to educational work. And the salary of this secretary might be paid out of that grant. Whether or not the members of the association should pay dues is a matter for individual decision in each individual case; although where there are benefit features dues will be required as a matter of course. Insurance premiums excepted, however, we would not urge the use of dues since new workers may feel suspicious of charges of this sort which they had no voice in incurring and have no way of avoiding short of leaving the job. It will be better to let specific activities finance themselves so far as possible out of the fees received for values given.

We have assumed that the employees' association is interesting itself largely in "service activities." But as long as its interests are thus narrowly restricted, the largest values will be ignored. It is as true of employee associations as of shop committees that *the true source of their power and significance lies in the closeness of their relation to the production process.* This is to be achieved in both cases by the use of job analysis and wage committees, by departmental production conferences and the other means already discussed.

Again, the employees' association, if it takes the form of a "company union," should not be thought of by the management as a full and adequate substitute for an organization of workers inclusive of those in other shops in the same industry. The company union is not a substitute for the labor union for reasons which we have already enlarged upon. It is a body with a different function from the labor union; a function necessary, important, conducive to mutual understanding and confidence. As an administrative area, the factory has its own problems, which can best be settled within that limited

jurisdiction. They will tend to be settled with satisfaction to all under the common deliberations of the employees' association. But there are in addition problems affecting the workers in each shop which are not confined to the shop in their influence and effect, and for these a larger administrative area of control has been found increasingly necessary.

Moreover, employers must not let the name "company union" mislead them into thinking that they have a degree of self-government which does not in practice exist. "Representative institutions," says Mr. A. E. Zimmern, "in themselves no more ensure real self-government than the setting up of a works committee of employees in a factory would mean that the workmen ran the factory. The distinction between representation and effective responsibility is constantly ignored."

The company union is a means of securing representation; but as it is usually conceived, it is not a responsible administrative body unless there are express grants of authority, and where such grants are given they usually pertain to relatively minor matters. This is not said by way of disparagement. It is perfectly legitimate that any company union should take on responsibility only gradually; but meanwhile the employees are likely to have no illusion as to how little self-government really exists.

In conclusion, we find a combination of an employees' association and committee groupings to be useful for the majority of factories. The association organizes the workers and gives them a sense of unity and cohesion. The committees represent the different natural groupings of the workers and speak for them in the discussion of policies and in decisions about methods. The one serves the factory as a body of will. The others are bodies for thought. Both are needed; both already exist in many plants in fact if not in name. Together they create the basic factory organization on which can be safely reared the more elaborate developments of a fully representative industrial structure.

One other plan of factory organization requires examination because of the wide attention it has recently received. We have already referred to it as the "federal plan."¹ The essence of this plan for "industrial democracy" is a structure of repre-

¹ For a full exposition see LEITCH, JOHN, *Man to Man*. See also the review of this book by ORDWAY TEAD in *The New Republic*, July 16, 1919.

sentation, analogous to the federal government of the United States. The executives form the cabinet; the foremen are the senate; the workers elect a house of representatives. These bodies meet on company time to discuss any and all matters relevant to the smooth working of the plant; decisions are executed by the cabinet, and this body has as well a veto power over the acts of the other two. In order to stimulate interest in economy and efficiency an "economy dividend" is paid monthly in those departments which cut operating costs. This dividend is reckoned on a basis of the savings in cost between present unit costs and actual costs; of which savings 50 per cent are given to the workers who helped to create them.

This, briefly, is the plan; and as living exponents of its success, there are over a dozen plants in which it has operated for several years. A catalogue of its points of merit would make mention of the following features: It is concrete in the kind of organization it proposes. The plan, because of the analogy to the federal government, appears to be democratic; and therefore has an immediately popular appeal to both sides. Personal contact between managers and men tends to be re-established. There is a cash stimulus to efficiency. And finally, and most important, the necessity for organization of workers and of organized relationship with them is recognized.

If the plan did nothing more than demonstrate the value of group action and of creating organized channels of intercourse between managers and men, it would serve a worthwhile purpose. And it is undoubtedly helping to transform and humanize the thinking of the employers who install it.

Nevertheless from the point of view of a close study of the governmental structure of industry, the plan has several serious shortcomings. First, it provides for no joint sessions. This is a drawback both from the educational and administrative points of view. There is value in having the other side hear a case stated against it; but there is little to be gained by having each problem discussed by three separate bodies none of which has had the advantage of being present at the discussions of the other two. This wastes time and it does not foster understanding through personal association.

No provision is made for resort to arbitration by an outside party. If there are any serious differences between executives and workers, the cabinet and senate can easily vote down the

workers since a measure must pass the three bodies to be adopted. The workers have thus no recourse to any outside aid or advice. The company has the services of Mr. Leitch; and his personality seems to be an important factor in assuring stability and the smooth operation of the plan. Thus the ultimate voice in control is always with the management.

This is certainly *not* "industrial democracy," although presumably the intention of a progressive plan of employee representation is gradually to broaden the basis of control and responsibility so that it no longer remains solely with the head executive.

This points to the most serious defect of all, namely the failure of the scheme to define the fundamental conditions of industrial democracy. This defect is seen in two directions. First, democracy in industry requires representation of all the really interested parties in the deliberative body which determines policy. This is not secured under the "federal plan" because the body that really determines policy is the cabinet—that is, the management. Second, democracy in industry, if it means anything, means the organization of the industrial life of a nation as a whole, for the avowed purpose of public service, on a basis of the autonomous control of each industry by those within that industry and probably with the title to the property vested in the community.

The conception of industrial democracy which sees no further than the confines of one shop would be absurd if it were not so prevalent. The good is in danger of becoming a decided enemy of the better if there is a wide extension of such a parochial plan as this basically is, without a clear understanding of its limitations. It cannot be said that any plan of employee representation as yet delays a time of wide organization and coming together among employers and workers in a whole industry, for that movement is proceeding on its own increasing momentum. But there is danger that shops which have their thinking too rigidly fixed in terms of factory self-determination will be slow to take their places in the bigger movements.

It is not difficult, therefore, to account for the present popularity of the federal plan. It is only nominally democratic. It assumes a complete harmony of interests and a permanent vesting of all authority just where it now is. It helps to create a specious company loyalty and a spirit of economy. It helps to personalize the management's thinking by stressing the fruit-

ful maxim that "manufacturing consists in making men—they will attend to the product." It shows the value of employee organization to employer and employee.

But, after all, there is every value in an employee association with its subordinate committee action, which there is in the federal plan, and other values besides.

The field of employee representation is new, however; and varied types of organization are being used by different companies with much satisfaction. The need is therefore not for dogmatic criticism, but for a cordial and sympathetic consideration of every plan and of its results in operation. Experimentation in shop representative organization is one of the needs of the hour and one of its hopeful signs.

CHAPTER XXXI

THE BUSINESS VALUE OF THE COLLECTIVE BARGAIN

The advisability from the business standpoint of collective bargaining with organized labor is seriously questioned by many managers. Probably upon no other question of executive policy do wider extremes of belief exist. Employers who for years have been accustomed to collective negotiations are as firm in their view that they would not return to the old conditions, as are the majority of employers that this method of negotiation should be opposed to the limit. In each case opinions are held with such an earnestness of conviction and depth of emotion that an examination of the question on its merits becomes exceedingly difficult.

Moreover, so varied are the types of labor unions, so varied their constitutions, their policies, and the agreements they have made that generalizations in one direction can easily be refuted by citing specific instances of a wholly contrary experience. Indeed every point in an argument either for or against the collective agreement could be countered by one or more illustrations to show that the point was not well taken. In the face of such a wealth of contradictory testimony the effort must be to go below the surface and analyze the more permanently true facts and tendencies in the relations of employers and labor unions. Of course, the actual extension of collective bargaining has not taken place as a result of the employer's calculating by a cool logic its advantages to him. But it is equally true that this type of agreement could not have extended as it has, if it had not certain definite business and social values.

The effort should therefore be, in any thorough analysis of all the elements of the technique of personnel administration, to see what elements of business value the collective bargain may already have shown, how its business value may be increased and what the limits upon its business value are. For after all, as a type of joint relationships of employer and employee the collective bargain deserves as careful scrutiny, from this point of view of a scientific managerial technique, as the shop committee

or any other proposal. Careful analysis of all existing experiments is the necessary first step toward the selection of a soundly constructive practice.

It is especially true today that the relations of employers to trade unions deserve scientific consideration. For the managing world faces a condition and not a theory in the size and growth of labor organization. Unions have already achieved a place in our corporate life which entitles them at the least to an intelligent understanding by employers. There are over five million organized workers in this country; and in the next decade at the present rate of growth there will be more than twice that number.

If for no other reason, then, than to know one of the strongest currents playing about the mind and heart of the manual and even brain worker today, the employer should have an adequate understanding of the claims of the unions, and of those employers who have dealt with them successfully. The employment administrator must be prepared to accommodate himself and his policies to the subtle forces and influences which are usually connoted in the phrase "the temper of the times." To know what working people are thinking and feeling is a definite duty of the executive in charge of personnel. The convictions and the successful negotiation methods of one group of workers are soon known and urged by other groups. The workers of every plant are exposed in a greater or less degree to the ideas which are "going the rounds" in the working class world. In this situation, the obligation upon the employer to *know* is immediate and real. He has to deal with contemporary psychology—current moods and sentiments—not with those which were current when he was in the shop or in college.

But the duty of being informed is, after all, a comparatively passive one. The manager has also to act on the basis of that knowledge—act favorably or not toward collective bargaining.

Definition.—"Collective bargaining" as used in this volume refers to dealings under written contracts or oral agreements with labor organizations in which are banded together the workers of a trade or industry in a given geographical area. A collective agreement may thus be made by a labor union with one plant, with one corporation covering a number of its plants, with an employers' association of a city, district or state, or with a national trade association or employers' group; although an

agreement which is in force throughout a district is often referred to as a trade agreement.

It is important to recognize that the phrase "collective bargaining" has recently been applied to a type of transaction which differs in a fundamental respect from the joint bargain as we define it. Employers are now speaking of negotiations with their own employees exclusively through the medium of shop committees, "factory councils," "company unions," etc., as collective bargaining. Of course, any use of a phrase is warranted if definition is agreed upon in advance. But to apply a term which has been used for decades to connote dealings with an inclusive body of craft or industrial workers, to dealings which are completely confined to the shop, seems to us not only confusing; it seems likely to lead to a deception both of workers and of managers as to the nature of the shop negotiations. Employers may honestly believe that there is no inherent and fundamental difference between negotiations which are limited to the employees of one shop and those carried on with unions, but, until this is shown, to apply the phrase "collective bargaining" to both types of transaction is to confuse the basic issues.

Assumptions of the Individual Bargain.—Discussion of collective dealings implies a comparison with some other form of dealing—usually with the individual bargain. For that reason it will be useful at the outset to examine the assumptions upon which individual bargaining really rests; and the conclusions to which they lead.

Dealings on an individual basis rest, first, on the assumption that the company *can* be responsible for protecting adequately every worker in its employ. This means, if the point is pressed to its final implication, that the company should have its agent present at every time and place where a point of friction or maladjustment with its workers might possibly arise. Or, failing this, the company should be sure that each employee will dare to and be able to voice any grievance or difference which has arisen, when that agent is absent. Ideally, under this assumption, an agent of the company should always be on the spot to straighten out difficulties. But this would of course require a degree of omnipresence which in the large factory it is practically impossible for the management to attain. As the alternative, the company should be sure that it can find out (become omniscient) through having the workers call attention to difficul-

ties as they arise. But, again, the assumption of the worker's courage and ability to speak effectively in self-defense is largely contrary to the observed facts under individual bargaining. In short, the implications of the individual bargain if they are honestly faced, place a heavy responsibility upon management with respect to the rightness of the terms and conditions of employment. Indeed, they are not only heavy—they seem almost super-human.

The second assumption is that the company *will* be responsible for protecting adequately every worker in its employ. So long as it profits the company to protect the workers' interests, and so long as the company knows (by omniscience, intuition or "mixing around") what those interests are, the wise management will try to secure that protection. But if a time comes when the company does not know the workers' desires, or feels that its aims are in any way opposed to those of the workers, there is no assurance that the company will act in a manner which it believes to be contrary to its own interest. In fact, it would be a strange act of benevolence if it did.

This implies, of course, a pursuit of self-interest on the company's part which some will characterize as unworthy or selfish. But we are concerned here with the realities of life rather than with moral imputations. If, then, in some critical situation the company follows its own interest, the employees' interests are no longer being protected; and the management has ceased to exercise the responsibility it has claimed to assume.

We conclude, therefore, first, that it is literally *not possible* for the company adequately to protect the workers' interests because in the last analysis it cannot by its own efforts fully know them; and second, that to attempt to protect them is only partially a responsibility of management, because if a divergence of aims appears to arise the company would act in its own interest. The continued use of the individual bargain in modern industry would, in short, assume a degree of supervision of workers which it is impossible to realize. And even if it were possible, its use would be out of harmony with that sound principle of management and government which says that "the rights and interests of every or any person are only secure from being disregarded, when the person interested is himself able, and habitually disposed to stand up for them."¹

¹MILL, J. S., *Considerations on Representative Government*, Chapter III.

The necessity for this self-protection is the greater in industry because of the fact that the only thing which the worker has to sell—his labor power—becomes daily less valuable if it is not sold. It is a highly perishable asset; and unless he can promptly and continuously realize on it, he is fatally weak. Under the individual bargain this weakness is, of course, at the maximum.

Business Values of the Collective Bargain.—If it is true that the individual bargain places upon management an impossible burden of responsibility, it is necessary to see whether the collective agreement is of value in reducing this burden. What are the ways in which it may have business uses?

First, the collective agreement tends to equalize the bargaining status of workers and employers. Surprising as it may seem this is of advantage to the employer. It is an axiom of good business management that effective production depends in the long run upon a relationship between the interested parties characterized by a high sense of mutual self-respect, regard for individual dignity and equal status.

“The real basis of equality in a democracy,” it has been well said, “is not equal pay, but equal dignity of function.” That sense of equal dignity and mutual self-respect is at the same time the basis of goodwill in joint relations, and the result of bargaining on a basis of approximate equality. Equal bargaining power may and should thus mean a relationship of goodwill and personal amity. Where this is not the case, where under a joint contract there is constant friction and quarreling, the difficulty is usually not due to the collective feature, so much as to those natural personal clashes and bickerings which have really nothing to do with collective bargaining as such. Only among equals can there be true loyalty, permanent interest in the joint enterprise, continued regard for the personal aims of each individual in relation to the common purpose of the group.

It may indeed be true that where equality of bargaining power exists loyalty and interest may not be present. Mere equality alone cannot create understanding, confidence and goodwill. There must be other deliberate and conscious efforts. But without equality any other efforts cannot be productive of truly right relations and right attitudes. Loyalty, interest and regard for personality cannot continue in the absence of a condition of equal status. The virtues fostered in a situation where this equality of status is absent are what the philosophers have

called the "slave virtues"—submissiveness, docility which occasionally breaks out into revolt, irresponsibility, and perfunctory performance of duties. Managers may to a certain extent choose the kind of working class attitude they will cultivate and capitalize. The alternatives today are a condition of equal status with the consequences in personal attitude among the workers which that brings; or a continued master and servant relation with its gulf of separation and the consequences of that which are today everywhere apparent.

Again, only among equals can there be justice, or a sense of the possibility of obtaining justice when differences arise. A group's conception of what constitutes justice will admittedly change from time to time. But that does not alter the fact that what they now think is justice is vastly precious in their eyes; and nothing so contributes to a deep-seated unrest as the feeling that the conditions or terms under which they work and the system under which they live are unjust. Such a sense of injustice is certainly somewhat modified by the use of collective dealings; even if some other type of relationship may eventually be necessary to satisfy later and more exacting conceptions of a just industrial order.

To the extent, therefore, that joint dealings create a sense of equality and justice, they may contribute as nothing else can to the creation of goodwill and a cooperative spirit in the process of production. And, once the negotiations are completed and terms agreed upon, there is every advantage to both sides in fostering this atmosphere in the shop under which alone the work can go forward quickly and well.

The Consideration of Grievances.—Another of the primary values of collective dealing is to supply a fair and prompt medium for the full consideration of complaints, grievances, and all differences. Continuous operation, friendly feeling and efficiency depend upon keeping the air clear at all times, upon having the thoughts, desires and hopes of both sides commonly known.

There are several theories as to the best ways of handling shop maladjustments. The first is the theory of the manager's "open door,"—a relic of the days when the majority of shops were small,—an attitude which finds expression in the sentence "my door is always open and any worker that has anything on his mind can come right to me." The success of this method of treating with employees depends on several factors. The mana-

ger's fairness and equanimity of temper must first be assured; and he must be fairly regularly on the job. It must be clear that the worker knows that this channel exists; that he dares to use it; and that if he uses it, he will not be discriminated against in the shop. And the question also arises as to what is to happen when all workers desire to press the same demand, but find, as is usual with the "open door" theory, that the manager "will treat with my men as individuals, but will *not* receive a committee." There are, in short, too many qualifying conditions to assure that maladjustments will find their way through the "open door." If they do not, a congestion of ill-will is developing which has its positive dangers.

Another way of handling complaints which has some vogue at the present moment is through the personnel department. This department is in certain plants being asked to serve as the channel of communication with the workers, as the medium of conciliation and the employees' spokesman. The members of the personnel department are conceived as moving about the plant, mingling with the workers, listening to their comments and establishing a cordial relation which makes the personnel worker the natural confidant of the worker in trouble. We have throughout these pages urged the necessity for personal contact between management and men. But it seems to us that to carry this idea to the extreme position which makes of the executives in charge of human relations, *the* agents for grievance consideration, or the mouthpiece of the employees, is radically to misconstrue the function of personnel administration. The personnel administrator rightly conceived is one of the management. True, he is that one of the management presumably best equipped by insight, special training and experience, to know the workers' point of view and desires. He is the one who specializes on industrial relations. But the same limitations upon communication between managers and men which apply to the "open door" theory, apply also to the use of the personnel department. It is still implied that workers know the channel; dare to use it; can use it without prejudice; can use it with expectation of prompt and fair action upon their case. It is still assumed that there are no grievances or demands which are a group affair; that in all matters affecting his relationship with the employer each worker is presumably concerned only as an individual. It is assumed, moreover, that some self-constituted agent can speak for the workers better than they can speak for themselves.

It has probably been true that some personnel departments have been introduced with a desire to find out in any possible way what the workers were thinking; to be, in other words, a high grade department of information. This is definitely an exploitation and a misappropriation of the true conception of personnel administration. And any management which allows the workers of its personnel staff to give validity to such a view by their activities, is in reality doing a serious injustice to the whole idea of sound management. It is true, of course, that the existence of a personnel department, the personal contacts which its members make, the point of view which its head espouses,—all tend to make the administration of human relations intelligent and satisfactory. But that is a purpose quite different from having agents of the management mingling constantly among the men to find out what they are thinking and hear what they are saying.

In fact, this method of personnel work borders too closely upon a third highly questionable method of knowing the workers minds. This third method is the use of detectives in the plant. Some managers have defended with considerable show of warmth the use of detectives in their shops because, as they said, "How else are we to find out what they think? We don't speak Polish (or Italian or whatever tongue it may be) and they don't speak English. And besides we must keep out agitators."

There are no problems of shop maladjustment about which the management has the need of full information, which cannot be better discovered in some other way than through detectives. Moreover, the presence of detectives in a plant creates more suspicion, ill-will and distrust in a month than all the activities of a personnel department put together can banish in a year. Nor is this putting the matter too strongly. What the detectives learn may be the basis of laudable corrective effort on the management's part; but in the majority of cases that effort is foredoomed to be fruitless of truly better relations because the workers know that they are not trusted, that they are being spied upon, that any spontaneous efforts at self-protection and self-improvement will be immediately suppressed. And where people's native self-respect is not being appealed to, no fundamental benefit is resulting.

A far more fruitful method of establishing a fair basis of *rapprochement* is the shop committee or the employees' associa-

tion. Short as has been America's experience with these types of organization, it has been long enough to indicate that much can be accomplished through their use in keeping adequate channels of communication and personal association open. Much can be done to make vocal and intelligible the workers' thoughts, demands, and desires. And there are shops now having such intra-mural organization, which may not feel any serious deficiency in that type of agency for some time to come. They will be able to settle with amity and good faith whatever disagreements arise.

But in a really fundamental analysis of joint relations it would be unjust to those wishing to consider a permanently sound policy not to go further. Hence it is in point to restate here summarily the limitations upon the use of shop committees as grievance-handling agencies.

Shortcomings of Shop Committees.—The shop committee has thus far in this country been an employer-created body. If at any time the management felt that it no longer cared to attend to or "bother with" the workers' thoughts, demands or desires, it could under certain restrictions stated in the constitutions of the plan, withdraw it altogether. Without question this would usually be bad business—be a display of serious managerial incompetence. Taking account of the workers' point of view is an important management duty at all times. Nevertheless, cases are not unknown where a management has changed its policy from one of cordial dealings to one of arbitrary exercise of authority. And if the workers have an organization which is self-initiated, self-perpetuating, and in receipt of outside support and counsel, there is at hand a body capable at once of preventing the employer from trying to do away with the agency of joint conference and capable of protecting the employee in case of that arbitrary action.

We know of one large plant in which a shop committee had worked satisfactorily and the management was in general pursuing a progressive labor policy, where the workers began to seek membership in the labor unions as soon as a son of the head of the company appeared in the business. The workers said definitely that they feared that the son would soon change the management policy unless there was some wholly self-sufficient employees' organization to withstand any reversion to a less liberal administration.

Again, the shop organization is not a body which can deal with the employer on a basis of equal bargaining power. The importance of such a sense of equal competence we have already dwelt upon. And it requires no elaborate argument to show that the modern corporation has at all times advantages in financial resources, executive leadership, association with other employers in the industry and permanency of life through a waiting period, all of which the employees of that corporation *do not by themselves possess*.

A third serious drawback, which helps to create the second, is the fact that leadership in the workers' organization is too likely not to prove a match for the ability of the executives against which it is pitted. So accustomed is the management to "playing the game" that it is hard for it to realize that there is a point beyond which it does no good to "play the game" on the workers. It may, for example, be possible to argue a shop committee into acceptance of a wage scale which is lower than the management ought to pay in order to get the kind of work it wants. But the manager who is always "playing the game" tends to get so interested in "putting it over" on the committee, that he fails to realize that he is in such a case also putting it over on himself.

Hence to prevent management from overreaching itself as well as to assure adequate protection to the workers, there is need for a leadership among the employees which can meet the management competently on its own ground. Such leadership in order to be upon a parity with the executive leadership it may confront, requires knowledge of the shop, knowledge of the industry, knowledge of local and general labor conditions, ability to present and argue a case effectively, ability to address the management with no fear of possible prejudice to one's job.

Only rarely will such a combination of requirements exist together in the employee representative. The case for the use of the business agent of the union rests in part upon this patent fact: *That the person who is to possess the combination of talents needed to meet business managers effectively on their own ground must be specially trained for the job and must be in a position where he is not directly dependent upon the management for his support.*

We recognize and urge that there are many important matters which can be much better handled wholly inside the shop with the workers or their delegates directly, than with a union agent. But if we admit the desirability of equal bargaining power, we must

be prepared to accept *those attendant conditions which really create equality*. And a dispassionate examination seems to indicate that the employment of an outside spokesman for the workers, in relation to matters like wages and hours, which help to determine the level of an industry's labor standards, is essential to bringing an approximate equality of bargaining power into being.

There is, however, little excuse at the present stage of union growth and development for continuous interference in shop affairs and practices by the local agents of the union—except where the employer's tolerance of unionism is so precarious that eternal vigilance by the union's representative becomes the price of continued joint relations. When union agents are a disruptive influence and are interfering unwarrantedly in the making and carrying out of agreements, the solution is in more, rather than less, use of organization. The remedy is in constantly striving to have the terms of the collective instrument explicit upon those matters which relate to the activities of the business agent, and upon the intra-shop machinery for handling purely shop frictions and grievances. For it will usually be found true that *the union organizer's activity in shop affairs is in direct proportion to the workers' conviction that they need help in securing justice and fair treatment within the shop*. And where over a period of time the management shows itself willing and eager to settle all shop differences in an equitable way and to fulfil the spirit as well as the letter of the joint agreement, the intervention of the business agent will seldom cause annoyance or inconvenience.

A final shortcoming of shop organizations is that they are not in touch with other groups and forces in the industry which are helping to determine the terms of employment under which the employees in any one plant can secure work. The shop group cannot act most wisely until it can act in the light of knowledge about the raw materials, the state of demand for the product, for labor, etc. Conceivably much of this knowledge could be assembled by the workers in each shop, but to secure it would require a degree of advisory conference with widely acquainted experts which would in the end come to much the same thing as now exists in the organization and activity of the international union in that industry.

There are, therefore, we believe, certain values necessary to the

maintenance of right relations which independent shop organizations do not provide. These values are to be attained, if this analysis is correct, by the creation and maintenance of a self-constituted workers' organization through which grievances can always be voiced; the use of an expert agent to intercede in the settlement of the larger issues; the creation of agreements which specifically define the terms of operation on many points which might otherwise be in constant dispute (*e.g.*, causes of discharge, time of payment, method of payment, etc.).

In short, collective bargaining as here defined appears to assure as does no other method of dealing between management and men, that all the time and on every point the rights of the workers are being guarded and are receiving adequate consideration. "Human beings," it has been wisely said, "are only secure from evil at the hands of others, in proportion as they have the power of being, and are, self-protecting; and they only achieve a high degree of success . . . in proportion as they are self-dependent, relying on what they themselves can do, either separately or in concert, rather than on what others do for them."¹

The writer of these sentences goes on to say that many "have a great dislike to it (the above proposition) as a political doctrine, and are fond of holding it up to obloquy as a doctrine of universal selfishness." But as he points out, it is not so much that one class or group now knowingly or deliberately ignores or trespasses upon the concern of others; "it suffices that, in the absence of its natural defenders, the interest of the excluded is always in danger of being overlooked; and, when looked at, is seen with very different eyes from those of the persons whom it directly concerns."

In asking consideration of the collective bargain as a positive guarantee of the exercise of a normal and necessary amount of self-interest, we are only pointing to a state of affairs which has constant advantage *to both sides*. For it is the state of affairs under which equal protection of the rights of all groups can at the present day best be approximated.

Moreover, to construe this argument as an encouragement of selfishness would be wholly to misunderstand our point. Under modern conditions the employee's first solicitude is inevitably and properly one for his own survival. Until he has assurance of the initial needs of life for himself and family it is

¹ MILL, J. S., Considerations on Representative Government, Chapter III.

humanly impossible to enlist his interest in wider purposes. It is indeed not too much to say that the attitude in which any work is done most efficiently is one where there is reasonable freedom from worry about making both ends meet. And far from characterizing anxiety for self-protection and efforts for an assured basis of livelihood as promptings of selfishness, managers should be seeking to establish an adequate basis of livelihood, either through collective negotiation, by universally operative legal minimum standards, or by both.

In short, it is true that it must be a primary concern of any group to see that watch is being kept over the essential conditions of its survival. An inviolable part of any group's generous and outreaching purposes is the protection of its own integrity. This is the first point at which self-interest and social interest usually intersect. It is only when any group's purposes are wholly selfish, anti-social and out of date that its primary self-interest may be irreconcilable with the social interest.

And it is further true that a group's integrity can in the long run only be assured by its own efforts. It is at least the first judge of the essential conditions of its survival. And because this is true, there has arisen the political principle which is now being slowly but definitely read into the theory of sound industrial government, that: *In carrying on an enterprise every participating group which is affected by decisions concerning the operation of the enterprise, should be a party to the making of those decisions.*

In pursuance of a discreet but inevitable application of this principle to industrial administration, the use of collective bargaining under ordinary conditions deserves careful consideration as the most practical and educational method thus far utilized.

CHAPTER XXXII

THE BUSINESS VALUE OF THE COLLECTIVE BARGAIN (CONTINUED)

A situation has now grown up where, even under the collective bargain, it is hard to provide for recognition and reward of different degrees of competence. The reason is, of course, that workers have found from experience that differentiations in pay through bonuses and piece rates prejudice the chances of the medium grade workers and tend to speeding up and rate cutting. Therefore, although the tendency has not yet worked out in practice to any great extent, it is now true that *only under collective bargaining* can any system of differentiation in work and pay on a basis of grades of competence at a job take place with safety to the workers. Only under collective dealing are the workers strong enough to control differential payments in ways not prejudicial to the security of the group as a whole. For the stock union objection to this differentiation does not arise out of a love of sloth or mediocrity; it arises out of a fear which only strong organization on both sides can remove.

The objection may be offered that recognition and rewarding of individual competence is one of the prime values of the individual bargain—which should be retained for this reason. And it was undoubtedly true in times past that by individual negotiations over terms of employment, individual initiative was encouraged, incentives held out and rewards adjusted to effort. But it certainly does not so work out under present-day arrangements—if we leave out of account the various premium methods of pay which have never had wide use nor been popular with the workers. The necessities of the case have already limited the actual operation of individual negotiations. Wages in large plants are now set uniformly for all at the same job; standard rates prevail even where there is no collective dealing. In short, any value which the individual bargain ever had with manual workers in the direction of supplying initiative has already disappeared.

Under collective bargaining there is, also, one agreement; one period of negotiation each year, instead of constant likelihood of demands; one party of the second part, instead of as many parties as there are employees.

The real business values of this consolidated bargaining are not to be ignored. It means that individual selection takes place on a basis of publicly known terms and conditions of employment; it means that these terms instead of representing what the management thinks the majority of workers will accept, embody what their recognized spokesmen have agreed to as desirable. It enables the attention of all, once the terms are agreed upon, to be fastened on other matters.

Moreover, the task of fulfilling the workers' side of the agreement devolves upon a national organization whose power and prestige depend increasingly upon its ability to honor the agreements which it makes. That this is a practical consideration will be realized if the alternative situation is imagined. If, for example, a company were to make through its shop committee a definite agreement for a term of months on a wage and hour scale, and if the workers were to break the agreement and strike, there would be no outside influence to help effect a resumption of work. But such a situation in a union shop is met by definite and usually effective, discipline from the national union headquarters, in terms of charter suspension and non-payment of strike benefits.

Two objections will, however, be properly raised in this connection. First, that when there are several craft unions in a plant, it is sometimes necessary to enter into several agreements; and second, that even with the disciplinary activities of the national union, contracts are sometimes violated by the workers.

It is, of course, undoubtedly true that where members of several organized crafts work in one shop, they may not have reached a point of sufficient federation to act together in the making of a single joint agreement. Every day, however, shows the federating principle more strongly at work and we see such strong groups as the building, printing, railroad, needle, ship-building, leather working, mining and metal trades,—all working in federation in the drawing of joint agreements.

Indeed, the objection that there is a variety of crafts (except where they create the delay and irritation of jurisdictional disputes) is not always the employer's objection. For he has fre-

quently found that he prefers to have different contracts with different craft bodies, which terminate at different times and thus prevent the likelihood of a simultaneous walk-out. As to jurisdictional disputes, they are without question a source of real and justified annoyance to the employer. He finds himself helpless before a controversy which he is powerless to settle, and the merits of which are often of no special interest to him. He is confronted with a result of economic evolution out of which the unions themselves hope to grow as soon as possible, since it hurts them no less than him. Meanwhile there seems to be no alternative but patient tolerance plus an effort to bring the disputing crafts together *before* methods or materials of work are adopted which may be potential sources of inter-craft controversy.¹ It may, indeed, be safely affirmed that objection to one agreement with a federation of crafts is not usually raised by the crafts involved. The employer who wants to include all negotiations in one agreement will increasingly find the unions ready to meet him on this point.

A further aspect of the value of having a single agreement—or a single agreement for all workers in a given craft or branch of a trade—is that it fixes labor costs at a definite figure during the life of the contract.

The Violation of Collective Agreements.—It is, of course, true that unions sometimes break their contracts. It is important to consider this difficulty as thoroughly as space will permit, since so much of the opposition to unionism focuses at this point. The problem has two aspects: First, the aspect of the breaking of agreements—why are they broken? Second, the aspect of the accountability of the unions for the keeping of the agreements—how can accountability be assured with due consideration for all?

There are four typical causes of the violation of joint agreements by unions:

(1) *The Sympathetic Strike.*—The sympathetic strike to aid the cause of fellow-workers in another craft or locality will always seem to the employer to be a dubious, if not indefensible, practice. Indeed, union leaders themselves appear to be increasingly sharing this view, since the tendency is strongly in the

¹ There exists now a National Board of Jurisdictional Awards in the Building Industry, consisting of eight members, three representing the Building Trades Department of the A. F. of L. and five representing the several employers' groups.

direction of taking away from local bodies the power of calling a strike, and vesting it in the executive committee of the national union; or of requiring a secret ballot referendum of the membership of the union. Statistical study of the causes of strikes indicates that these changes are having a decided effect—since fewer and fewer strikes of sympathetic origin are now being called. This objection has, in short, much less force than it had a few years ago.

It is, however, useful to understand why the sympathetic strike is used. It rests upon a premise which the employer cannot ignore, since much working class sentiment and policy are based upon it—the premise of the solidarity of all manual workers' interests. The cause of one worker, in this view, is the cause of all; all rise together and advance only as fast as the rear guard advances. This belief has its negative and its positive manifestations; that is, it is used for the purposes of defence and offense. The sympathetic strike, as a defensive weapon, is used by workers to assist their fellows in preserving or improving their status as wage earners. And it seems reasonably clear that its use for this purpose will decrease as soon as the workers find that with stronger organizations they can utilize better ways of bargaining.

The case is different, however, when the purpose of the strike is to effect a *change in the status* of the worker, or to advertise the possibility of such a change taking place. The strikes in Winnipeg and Seattle early in 1919 illustrate the use of the sympathetic strike for this offensive purpose. Indeed, they illustrate a new type of strike.

(2) *The Unforeseen Contingency*.—One of the most frequent causes of broken agreements has been the entrance, after the signing, of some unforeseen contingency from which the agreement appears to offer no relief. Examples of this are rapid increases in living costs, new machinery or new processes with the problem of re-setting rates, providing for displaced workers, and changes in the state of demand for the product. The difficulty in the majority of such cases is usually that *the agreement has not provided adequately for dealing jointly with all special cases*.

And in the remainder of cases it is probably true that the union has made the appearance of new conditions the occasion for increasing the strength of its defenses. If, for example, after an agreement is made, the workers find that the demand

for the product is peculiarly brisk, they may decide to take advantage of the situation to press for higher wages. There is, from the employer's point of view, little or no justification for such questionable tactics; and in the stronger unions little support could probably now be rallied to such practices among the workers themselves. But no understanding of union tactics is possible, if one does not bear in mind that the first concern of the working class organization is to bring itself to a point of strength where it is able to do its defensive work adequately. This is not said by way of palliation of any union tactics; it is said only by way of explanation. The present-day union, we have always to remember, is primarily a *defensive body*. Its primary reason for being is to protect the minimum standards of living and working which the workers have already attained—and its secondary reason is progressively to advance those standards.

In short, the best remedy for a situation where agreements are broken because of some unforeseen contingency, is to see to it that in the future the agreement is sufficiently explicit and flexible to cope with all possible developments. It will, therefore, be advisable for us presently to consider what the form and content of the collective bargain should be.

(3) *The General Strike*.—This is a manifestation of working class solidarity which generally has as its object to demonstrate the power of the workers—power to act independently and power eventually to take an effectual part in the control of industry in some other capacity than as “wage slaves.” The general strike, “the revolutionary strike,” “the strike of the folded hands,”—these are methods of militant action directed more or less consciously against the present system. They are cessations from work which are often unaccompanied by the presentation of any formal demands.

It is important for employers to understand this type of strike; for it is a form of working class activity which may spread where conditions are such as to afford soil for “revolutionary” propaganda. And it will, if recent instances provide proof of a recognized technique, probably appear largely as a “manifestation of solidarity,” which occurs suddenly, without warning and only for a few days' duration, rather than as a specific demand for a change in methods of shop or industrial control.

The general strike is the more bewildering to the employer in

that it is not directed against him, but against "the system." To be sure, the employees of any single corporation which provides exceptionally fine working conditions and generous terms of employment, may be immune from these "radical" influences. But that after all proves nothing, as such corporations are not typical of corporate behavior; and even if they were, they would be accused of subversive "benevolence" by those workers who condemned the system as unethical or unscientific.

As a practical matter, it is largely a question of the management's vision, good temper and ability to adopt a group of policies which will be educational in the best and widest sense. Some well-managed concerns may be destined to suffer irritating and distressing interruptions from this cause. But if the general strike is viewed historically as well as practically there will be less occasion for managers to despair of the efficacy of their work and of their personnel technique. Labor "solidarity," even in so extreme a manifestation as the general strike, usually represents a groping but fundamentally spiritual movement toward an organization of industry for service; and to the extent that this is true the progressive administrator need not seriously fear it.

(4) *Prior Breach of Agreement by the Employer.*—Instances are at hand where workers feel that the contract is already broken by some failure of the employer to fulfill his obligations; and this then becomes their excuse for breaking it, or for presenting new demands. Obviously the employer's dereliction does not excuse the workers. It only shows that where a breach of agreement is claimed against a union by the employer, it is important not to jump too hastily to the conclusion that the workers alone are in the wrong. It would, of course, be extraordinary if with the hundreds of agreements which are entered into yearly, there were not some in which the breach was on the management side. In other words it is necessary to judge each case on its own merits.

But, it may be said, a contract is a contract; and there should be some means of redress, some accountability of the union today for its actions in breach of agreement. If the union chooses to indulge in arbitrary methods of defense, it should realize how truly expensive and hazardous they are. This view is so frequently urged as to require careful scrutiny.

The first point to be clearly established is the extent to which

the collective agreement is a "contract." We quote extensively an opinion on this question, not because it argues any the less for having unions feel accountable and responsible for living up to agreements, but rather to make clear the legal status of the union as compared to that of the corporation.

"The difference between a labor union and a business organization, and between a trade agreement and an ordinary contract, is well expressed in a recent decision of the Supreme Court of Kentucky: 'A labor union, as such, engages in no business enterprise. It has not the power, and does not undertake, to supply employers with workmen. It does not, and cannot, bind its members to a service for a definite, or any period of time, or even to accept the wages and regulations which it might have induced an employer to adopt in the conduct of his business. Its function is to induce employers to establish usages in respect to wages and working conditions which are fair, reasonable, and humane, leaving to its members each to determine for himself whether or not and for what length of time he will contract with reference to such usages. . . . It (the trade agreement) is just what it, on its face, purports to be and nothing more. It is merely a memorandum of the rates of pay and regulations governing, for the period designated, enginemen employed on the Chattanooga division of the company's railway. Having been signed by the appellee, it is evidence of its intention, in the conduct of its business with enginemen on said division, to be governed by the wages and rules, and for the time therein stipulated. Enginemen in, or entering, its service during the time limit contract with reference to it. There is on its face no consideration for its execution. It is therefore not a contract. It is not an offer, for none of its terms can be construed as a proposal. It comes squarely within the definition of usage as defined in *Byrd v. Beall*, 150 Ala. 122, 43 So. 749. There the court, in defining usage, said 'usage' refers to 'an established method of dealing, adopted in a particular place, or by those engaged in a particular vocation or trade, which acquires legal force, because people make contracts with reference to it.'

"The so-called 'contract' which a trade union makes with an employer or an employers' association is merely a 'gentlemen's agreement,' a mutual understanding, not enforceable against anybody. It is an understanding that, when the real labor contract is made between the individual employer and the individual employee, it shall be made according to the terms previously agreed upon. But there is no legal penalty if the individual contract is made differently. To enforce the collective contract would be to deny the individual's liberty to make his own contract."¹

¹COMMONS and ANDREWS. Principles of Labor Legislation, pp. 117-118.

In some cases the placing of a bond by both sides as a guarantee of fulfillment of the agreement has been used with a measure of success. But the usual counter-proposal of employers has been to incorporate the unions, in order that they may thus be made subject to suit if "breach of contract" or any illegal act occurs. Indeed, some employers have claimed that if the unions were only "responsible organizations," they would be willing to deal with them. This sounds eminently reasonable. Logically and abstractly, there would seem to be no serious objection to incorporation of unions. But we are not dealing in abstractions nor in matters where legal consistency is the only criterion. When we examine the present strength of trade unions and their primary purpose, difficulties begin to appear.

Unions exist to protect by group action the fundamental interests of employees; to assure in the first instance earnings and conditions of work sufficiently adequate to preserve a healthy and happy standard of living. Under present circumstances organized workers receive amounts too close to the minimum of subsistence to make it possible for them to lose money invested in their labor organization without such loss jeopardizing their very livelihood. *Property can stand loss by penalty; life at or near the margin of subsistence cannot.*

Moreover, until the law specifically concedes and recognizes the right to organize in protection of one's livelihood as being at least equal to the right to protect property, the incorporation of unions would mean the legal recognition of bodies which must resort to methods which are now held illegal in order to carry out their fundamental purposes. It is at this moment by no means clear what the legal position of the trade union is. Court decisions have in recent years construed trade union activity as being a conspiracy in restraint of trade, as an effort to deprive employers of property without due process of law, and as an impairment of the right of freedom of contract. In other words, to incorporate unions would make it easier than it now is to penalize those bodies for acts which are or might be declared "illegal," however humanly justifiable they may be.

The strike, clumsy and costly a weapon as it may be, is labor's most powerful instrument of self-protection. Yet if in striking unions were held to be conspiracies in restraint of trade, agents depriving employers of property without due process of law, or agents causing workers to break individual contracts, they could

be sued to the limit and their effectiveness thereby nullified. It should be axiomatic that if a body becomes legal, as the union would if incorporated, the only course which it can pursue to fulfill its legally defined purpose, would be legal also. This is *not* saying that all its acts are therefore legal. Legality would, however, have to be interpreted, not as it so often is today in terms of abstract concepts of "property rights," "freedom of contract," "equality," etc., but in terms of the *raison d'être* of the organization and of the *human* context and consequences of the particular acts in question.

The means are already at hand to prosecute union leaders for criminal acts. Damage suits may be used to meet definite offenses. Indeed, so formidable might their use become that Commons and Andrews are led to say:

"The menace of the damage suit is best brought out in the contrast between the position of the members of labor unions and that of stockholders in corporations. It is evident that labor unions are very much looser organizations than are corporations. Unions must entrust their officers with great power; the rank and file of the members know little about what the officers are doing. Even when members disapprove of the actions of the officers, they can ill afford to get out of the union, as they would lose their insurance benefits and in many industries would find it difficult to get a job. These are reasons why the members of labor unions should not be held to the same accountability for acts done in their behalf as are stockholders in corporations. But in the United States the members of labor unions have the greater liability. For a tort committed in behalf of a corporation, the stockholders can be held only to the extent of their stock subscription, or double the amount, under certain laws regulating banks. The members of labor unions are responsible without limit for tortious acts done in their behalf."¹

We cannot repeat too emphatically that it is essential to create conditions under which both corporations and employees will feel and act as responsibly as possible. Indeed such a conscious assumption of responsibility for operating the industry as a social service, is basic to industrial amity. But under existing legal and social arrangements, responsibility cannot be fostered by compulsory enactments. Admittedly as matters stand today the cultivation of such a sense of responsibility is not the work of a year; the attitude of workers and employers alike has not been one which stressed a common obligation to the com-

¹ COMMONS and ANDREWS. Principles of Labor Legislation, pp. 121-122.

munity. But like other values of attitude and motive, the sense of responsibility can be fostered and universalized. It can be fostered by assuring to all parties the fullest protection to organize and deal together in open and honorable ways; and by fostering throughout the community an attitude which sees in industry a public trust, and in work a public service.

As matters stand today, incorporation of unions would have, in short, a tendency to defeat the very features in them which it is from every point of view advantageous to preserve, namely, the assured, effective and continuous protection of the workers' rights by their own self-constituted organizations. This brings us to a specific statement of a further value in the collective bargain.

The collective bargain offers the only real protection to the employer against his natural impulse to economize in the easiest but ultimately most expensive way. The best reason, for example, why the economy of high wages is not more readily seen by employers is that the pressure of competition and the demands of investors impel them to the most obvious and immediate retrenchments. Wage rates are one of the few items more or less within the employer's control. The price of raw material is, for immediate purposes, fixed; machinery costs are given; selling costs are known; prices are set within narrow limits. Economy—the obvious and superficial economy—seems to lie in keeping the wage bill low. Even when managements understand the sources of real economy in better equipment, better routing of work, more economical methods of purchase and sales, and better selection and training of workers, there may be initial expense and effort attached which look prohibitive. But more often inertia and ignorance of the science of management prevent employers from getting to the sources of leakage. Careless planning of work within the shop or in relation to sales, with resulting congestion in one department and idleness in another; poor handling of materials; meager production records; bad arrangement of machines; insufficient light or air; inadequate training of workers; to eliminate all these possible wastes for which the management is responsible is certainly not an easy way out.

Moreover, it is hard to believe that the same group of men can do as much or more in eight hours than they can in nine; or perhaps do more or better work on \$30 a week than they did

on \$25. Evidence exists to prove that such things have happened. But each employer's contention that his business "is different" can be confidently met only by insisting that the results of possible new policies and methods must be determined by trial.

Hence, the employer needs constant and effective protection from the temptation to short-sighted economy in his wage bill and in prolonged hours of labor; and an active inducement to improve those terms of employment.

The protection thus secured by union standards for the employee is definitely valuable for the employer. The collective bargain assures the worker a continuance of living and working standards already gained; and holds clearly before the management the useful idea that those standards cannot be molested without endangering the energy and vitality of the workers and their families.

There is another value in the collective bargain which is greater, as the same agreement applies over a district, or as practically uniform terms are included in the several agreements in a locality. This is the value of uniform labor standards below which no competitor is allowed to produce. Every manufacturer is familiar with the condition which Mr. Mackenzie-King has called the "law of competing standards,"¹ which states that there is a tendency for the terms and conditions of employment to fall to the level of the lowest terms and worst conditions which are offered in the industry.

This tendency is active despite the desires and efforts of the more intelligent managers in an industry; that is, it is active *unless there is an industry-wide organization of the workers to enforce upon all employers alike certain defined minimum standards.* The activity of such a workers' organization tends, as we see it for example in the garment and boot and shoe trades, to discourage the small-scale family shop and the marginal shop, and to offer encouragement to those better managed units which have capital enough to provide adequate working accommodations and reasonable permanency of employment. In other words, such activity on the part of the organized workers has proved to be a stabilizing influence upon the working methods and human standards of an industry.

A lesser value of collective dealing which should be con-

¹ MACKENZIE-KING, W. L. *Industry and Humanity*, p. 67.

sidered in this connection is that of having the skill and competence of each worker approximately known because of his membership in an organization where certain titles of occupations and standards of efficiency for an occupation are established and known over a district. It is, for example, important to have some agreed connotation for the word "machinist" or "carpenter" or "riveter." It is increasingly valuable to have uniform names for jobs; and to have defined standards of workmanship attaching to those names. It is coming to be recognized as a real industrial asset to have the name "boilermaker" when attached to a worker mean a man who has passed through a certain period of apprenticeship or training at certain kinds of work and who by virtue of his title is qualified to perform a certain range of jobs. Manifestly it is almost impossible to universalize titles and craft standards in the absence of a fairly inclusive organization of the workers which can help to maintain both titles and standards.

But there is a practical difficulty in the way of realizing this value, as things are today. Under the constant urgency of securing "100 per cent. organization," the standards of craftsmanship are too often not rigorously upheld by the union if the applicant can satisfy his fellows that he will make a "good member." The bars thus tend to be let down more frequently than is wholesome for the maintenance of careful classification of skill, and of the prestige of the craft. It is only another instance of how, as long as the union's attention has to be fastened on self-perpetuation, it cannot simultaneously be fastened on the maintenance of craft standards and the solution of other production problems.

The Educational Values.—The drawing up and administration of collective bargains has also educational consequences for the workers which employers should not ignore. Cases have not infrequently arisen where employers have said to the unions: "We cannot grant your demands and stay in business, as long as the employers in the other manufacturing centers in this industry do not have to deal with unions and live up to these terms and conditions which you demand. Go to those cities; organize the plants there and get them on an approximately equal competitive basis; then come back and we'll consider the demands."

In such a situation workers come to realize the extent of their community of interest with those of management. They come

to realize the number and intricacy of the factors involved in effecting wage and hour settlements. They come to know that there should be a fact basis for those important decisions which concern them. This knowledge among the workers tends presently to increase the stability and uniformity of the labor standards of an industry; for it means that the union brings pressure upon the wayward and backward employers in a way that the other employers never can, no matter how progressive their own individual policies may be.

It is finally important to consider a merit of collective bargaining which is in a sense largely potential today. We have pointed out that a sense of security of livelihood is a prerequisite condition of interest in work. Only the worker whose mind is free from financial anxiety and uncertainty is in a mental condition to interest himself thoroughly in his work. It is true that all who are thus free, are not interested; but this freedom is one necessary condition, and with it given (as it is to a certain extent under a collective bargain), it is possible to take the other steps necessary to secure positive interest.

We have already discussed these steps in previous chapters; and it only remains to point out here that the collective agreement offers the logical place in which to define and agree upon standards of amounts of work and to develop the interest to which this process of joint determination almost inevitably gives rise. We know of only one or two isolated cases where today the union bargains with the employer about amounts and quality of work. And in those cases the agreement is not based upon data secured from the type of *scientific study* which we proposed in discussing job analysis. For this important reason these instances do not offer a completely analogous illustration.

The use of collective agreements for this definition of work standards is, therefore, a potential one. But by this means of deciding them collectively, it will be possible to develop productivity to a degree now quite unrealized.¹

Subject Matter of the Collective Agreement.—We are brought logically at this point to ask: What terms and subject matter should the agreement include, if it is to have this maximum business and social value?

In enumerating the essential items of a joint contract, we are

¹ There are now encouraging evidences in the needle trades of a willingness on both sides to come to agreement on standards of output.

assuming that no other operating document is in effect between the parties. As we shall see in discussing national industrial councils, there is in progress a new development in industrial constitutionalism, under which certain matters now necessarily covered in the collective bargain, might be decided once and for all in the constitution of the industry. But in the absence of such a body of basic law, there will be the need of specific definition covering a number of problems. This definition need not, however, be a part of the actual instrument under which joint dealings occur. There is much to be said for a type of agreement which is extremely simple in form, leaving all detailed provisions to be made from time to time as new conditions arise. But it is, under any method, important to have in mind the possible sources of disagreement which should be defined in some way to mutual satisfaction. For this reason we list the following matters concerning which some understanding is highly desirable:

(a) Hours.

This should include a statement of hours per day and per week, opening and closing times, vacation provisions, agreed holidays, rest periods, etc. There should also be agreed restrictions on the amount of overtime, night work and Sunday work.

(b) Work.

This should include a statement as to amounts of work at each job in each of the agreed number of grades (see Chapter XIX). This should be provided both for week and piece work.

(c) Pay.

There should be a statement of amounts of pay in relation to each of these grades of work; provisions regarding overtime pay, special rates for night work, Sunday and holiday work.

There should also be a provision that if the cost of living rises during the life of the part of the agreement relating to wages by more than an agreed amount, there will be a reconsideration of wage rates.

(d) Standards of physical working conditions.

(e) Provision for joint machinery, first within the plant, then with agreed outside persons, for the purpose of:

1. Administration and enforcement of the agreement.
2. Consideration of grievances.
3. Interpretation of the agreement.
4. Amendment of agreement.
5. Renewal of agreement.

6. Terms of admission of new workers.
 7. Terms of discharge.
 8. Terms of promotion.
 9. Terms of introduction of new machinery and changes in process.
 10. Study to determine standards of production.
- (f) Definition of the scope of joint dealing.
- (g) Date of expiration of agreement (or, if it is *in perpetuo*, of those parts of it relating to wages).

Careful study of this list will suggest why it is that collective bargaining in the past has not always been as mutually satisfactory as it might have been. Some of the past omissions have been due to careless and unbusinesslike procedure; some to lack of vision on one side or the other; some to an unduly narrow conception of the purpose of collective bargaining. In so far as the fault is a matter of omission only, it is easily repaired. But there are real shortcomings in the collective bargain as now practiced which should be faced.

Shortcomings of the Collective Bargain.—The most fundamental criticism of the collective agreement as it is now used, is that *it concerns itself primarily if not exclusively with problems of the distribution of a portion of the income from the business.* We have explained why this has had to be so in the past; but we have also indicated why in the future this need be less and less true. The key to an understanding of past and present union activities is a realization that *unions have been bodies of people acting together as consumers.* They have been primarily concerned with a standard of life. This has been not only defensible but essential. But it has meant that the interest of the union, and too often the interest of its members, was less in shop affairs than in the rewards for their labors. They had not, so to speak, gone behind the returns.

Perhaps it will now be evident why we have so stressed this idea of joint conference on work as well as pay. We find agreement on job analysis and job determination to be the bed-rock on which all future joint dealings should be based. This new subject of conference has the incalculable value of gradually shifting the emphasis and point of view from issues surrounding distribution to those surrounding production. Not that this means the workers are to get any less of the total income. It

means rather that they will have become so assuredly and avowedly partners in the distribution, that this is taken for granted; and attention is turned toward production.

It may, therefore, be fairly asserted that the usual collective bargain of today errs on the side of too great attention to the division of the income.

Again, collective bargaining confined to one plant, or even to one district, may give temporary advantage in the selling market to those plants where union conditions are not enforced. This is not always true, since the union conditions may increase production and lower costs. But where the differences in terms are extreme, the isolated unionized plant may be at a temporary disadvantage. It is, indeed, unfair for such a shop to be pitted against the efforts of the shop of the most unscrupulous and selfish non-union employer. And there is no relief of permanent value short of having these other plants brought under similar conditions of collective dealing. In short, this is not so much a shortcoming of collective bargaining, as it is a result of its slow extension. What is increasingly needed is joint action not confined to single plants or localities and not restricted merely to consideration of the immediate terms of employment.

It is this next step in the hierarchy of industrial government which we shall consider in discussing national industrial councils. For there is clearly developing a crying need, from the point of view of effective business organization, for a basis of common action between the organized employers and the organized workers of an industry on a district and on a national scale—bodies which shall be influential in determining common policies on those fundamental matters of production and labor relations where competition has proved destructive, demoralizing and hurtful to all.

Objections to the Collective Bargain.—Already in assessing the business values of joint bargaining we have considered some of the familiar objections. It will now be useful to summarize these and to complete the list of objections which deserve serious consideration. We shall, therefore, state these objections in the terms most usually employed.

(a) Workers do not want collective bargaining; they prefer the liberty of individual contract.

In so far as this objection is not one which the legally minded employer has put into the mouths of the workers, it is on a par

with the citizen's objection that he does not want to send his son to school, or does not want to pay taxes to provide improvements on his neighbor's street. "The illusory freedom of the individual bargain," says Mr. Webb, "must give way to the compulsory freedom of the collective bargain." There will, of course always be workers who are acutely individualistic and reluctant to align themselves with labor organizations because of fear, indifference, inertia, pride, stubbornness or other causes. But their attitude offers no more valid objection to the claims in behalf of joint dealing, than the selfish father's or taxpayer's objections offer to education or taxes.

The objection arises out of a conception of individual freedom and of the ways it may be secured, which the twentieth century has perforce outgrown. Liberty is increasingly being seen as a state of affairs in which some moderate restraints upon individual whim are a necessary condition of the true freedom of large numbers of people.

(b) If the employer treats his workers fairly, there is no need for a working class organization.

This objection we have already considered sufficiently in analyzing the legitimacy and primary value of a degree of self-interest and self-definition of that interest, and in stating the soundness of the principle of representation, of all groups having special interests in the conduct of an enterprise.

(c) Unions go out on a sympathetic strike when they have no direct dispute with their employer.

We have seen that this has been true in some cases.

(d) Unions do not keep their agreements.

That this statement also contains a measure of truth cannot be denied. It would be true also to say that employers do not keep their agreements. It is, in both cases, a too sweeping generalization. We have already considered the proposal of incorporation in order to make unions accountable and responsible. On the whole it is our conclusion that maximum success in holding both sides to their word results from having strong organization on both sides, amicable personal relations between the leaders on both sides; and a common desire for fair play.

(e) Unions make it difficult to discharge the inefficient.

To the extent that this is true, a remedy lies at hand in securing joint agreement on standards of workmanship at each job. As to other causes for discharge, there should also be a definite joint

understanding and method of adjustment.

(f) Unions make it difficult to reward the efficient; they put a premium upon mediocrity.

There is a certain force in this objection; but the condition is not in any way inherent in collective bargaining. It is merely a characteristic of some collective bargains that are not well-drawn, and of collective dealings which do not treat of amounts of work. Moreover, some unions contend with justice that their union wage scale is only a minimum scale. Also, the limited extent to which superior individual workers in non-union shops are paid above the going rate does not indicate that there is any widespread desire among employers to pay high differential rates.

(g) Unions limit output and restrict the use of labor saving machinery.

This is another sweeping generalization which has a certain fact basis. It would, however, be equally true to say that *all* workers do both of these things. It is an almost inevitable consequence of a condition of bargaining over pay but not over work, and of a condition of economic insecurity. To give serious weight to these objections in evaluating collective dealing is to attribute a result of general causes to an only incidental specific cause. Moreover as we have shown, relief from a policy of limitation is *only* to be found in the joint conference and agreement on amounts of work which collective bargaining can and should entail.

(h) Unions create confusion and interruption of work by jurisdictional disputes over which the employer has no control.

There is a measure of truth in this criticism, although it is a diminishing feature of union activity. As soon as federation and joint conference on jurisdictional problems take place, the annoyances of interruptions of work become increasingly negligible.

(i) The presence of unions and collective contracts submits the employer to negotiations with and control of certain items by an *outside* agency; the unions tend to "run the shop."

We have already shown that such "outside interference" is really a benefit to the employer since it helps to secure adequate protection of the workers' interests. It is, moreover, not an "outside" influence, if only managers will accustom themselves to viewing the problems of all the shops of an industry as inter-

related and interacting. Some of the most regrettable shortcomings in managerial thinking today are due to this failure to realize that *no shop works or can work unto itself alone*. In the most vital problems of labor relations it is increasingly imperative for the manager to think in terms, not of the shop, but of all the shops of an industry, And the union agent, as the spokesman of the organization of the workers of an industry at large, is as necessary a functionary as the executive secretary or the legal counsel of the trade association. To stigmatize him as an "outsider" is simply to ignore the necessarily elaborate structure of modern industrial government.

Where the objection that the union tries to "run the shop" has any foundation, it is due to abuses of the collective principle for which both sides are probably to blame. The objection assumes that employees' efforts toward control are irresponsible, unreasonable and arbitrary. Such may in individual instances be the case. But in the machinery which the collective bargain should provide, if it is properly drawn, lies the remedy for any serious ambiguity and discord over shop control. Often, also, unduly arbitrary conduct on the part of workers is due to ignorance of the relevant facts; a condition which can be remedied by proper research and publicity.

(j) Union demands culminate in a stand for the "closed shop." This restricts the freedom of any worker who does not join, and hence is "un-American."

It is true that unionism in order to fulfil its purpose—indeed in order to be sure of its existence—logically implies that the shop shall at least give preference in employment to union workers. Otherwise the union members employed would be gradually superceded and the collective agreement would no longer have binding effect on the company in its dealings with new workers. If the union is to be responsible in any degree for upholding its end of an agreement it must have assurances that the great majority of employees are under its control.

The only question of fundamental importance which may be raised in this connection relates to the ease with which one may enter the union. It may be that in certain cases the rules for admission to the union are unduly severe; and where such a union has a "union shop" agreement, hardship might result to the new non-union worker because of his inability to meet the conditions of membership as a condition of employment. But the

usual case in a union shop is that there is a reasonably "open union"—that is, membership is easily secured. Hence, so long as there is an open union in a union or preferential shop, there is no serious infringement of any individual's freedom—*if the conditions under which any reasonable measure of fundamental freedom can today be assured, are understood.*

(k) A final objection sums up the feeling of opposition when it says that collective bargaining is "all right in principle but not in practice." By this statement the manager usually means that he has not the patience or the faith in the positive elements of human nature to undertake the mutually educational project which collective bargaining really is. Or he may mean that his own plant "is not ready for collective bargaining;" or that while recognizing it as eventually inevitable, he desires "to be boss in his own shop" as long as possible.

The manager who is disposed to admit that despite its shortcomings the collective bargain is probably the direction which negotiation with employees must today take, may, however, still object that a different kind of organization, a different type of leadership, a different prevailing animus and bias from those now usually found in unions, is required if collective bargaining is to succeed as a constructive force. This objection, too, we have in a sense anticipated in saying that the unions have tended in the past to act as consumers. The radical shift in motive and method involved in bringing them to act as groups of producers can certainly not be ignored or slighted. And we have no disposition to under-estimate how considerable may be the change required in certain unions to create the outlook here proposed. Indeed, in some few cases the power of adaptation to contemporary conditions may have disappeared. Where this is found to be true, there will be but one solution; another organization of the workers must (and will) grow up to supplant the old. We do not consider this to be a usual necessity. The unions' powers of adaptation and development are great; and in all probability the change in their outlook will come as fast as it can be applied in practical affairs. We are today not without evidences that the major union bodies possess in themselves the leaven of this new and constructive emphasis—this emphasis upon production, upon economy in operation, upon a thorough application of science to management.

Conclusion.—Our estimate of collective bargaining as a business value is on the whole favorable. A much more critical picture of trade unions could easily have been painted had we cared to emphasize those unfortunate cases of corruption, dishonesty, intrigue, inertia and irresponsibility, which could undoubtedly be cited. Yet were we to admit the worst that may be said of unions and of bargaining with them, we would still be compelled to conclude that from the business point of view it would be necessary to create some organization of employee and working class sentiment for certain essentially business purposes.

Indeed, employers are already doing this in the shop committee development; and it is idle to suppose that there will not soon grow up a degree of federated activity among shop committees which will form in essence the same kind of bodies that unions are. Organization of workers is as essential to any stable industrial structure as organization of citizens into townships, municipal corporations or states.

Collective action, the dealing of group with group, associated negotiation of those having one purpose and point of view with those having another—this is necessary and valuable to the employer today just as are stable relations with the banks and with distributing organizations. "Whether we will or not," says ex-President Taft, "the group system is here to stay, and every statesman and every man interested in public affairs must recognize that it has to be dealt with as a condition, to be favored in such a way as to minimize its abuses and to increase its utility."

The practical business utility of the collective transaction must unquestionably be increased. But this is not the work of a day or a year. It is an enterprise on which every employer desirous of creating goodwill, mutual understanding and closer personal association between managers and men, can profitably embark as soon as his workers also desire it. He can commence through shop committees on job analysis and wages to establish a wholesome basis for adequate common knowledge and action. And the employer who is already party to a collective agreement can help to make it a more effective instrument in those ways already mentioned.

Progress is in any case assured, as soon as employers become convinced that collective bargaining properly conducted is one of the principal means of restoring interest in work, creating

a sense of self-respect and human dignity in the workers, and educating managers as well as managed into their respective responsibilities for a productive industrial system.

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CHAPTER XXXIII

EMPLOYERS' ASSOCIATIONS

That it is a good business proposition for corporations to join employers' associations is no longer doubted by the majority of managers. It may be less clear, however, that the work and character of those associations is likely in one way or another to have its influence upon the labor policy and procedure of each constituent corporation. We believe such an influential relation exists; and for that reason we shall consider the several types of employers' bodies and their functions, in relation to the work of personnel administration.

This demonstrable relationship is of two distinct types—positive and negative, constructive and repressive. And it is therefore essential for the personnel manager in his efforts to maintain right labor relations, to estimate the influences of the affiliations of a corporation upon its own labor policy. These affiliations may be employers' organizations of four types: A local, general body of employers; a local group in one trade; the national trade association; and other miscellaneous national industrial associations.

Local Associations.—The local chamber of commerce is usually in fact a preponderantly employer group. Its influence in the local community is often great, but its direct connection with the operating problems of industry is not usually close unless it has an industrial relations committee which seeks to prevent strikes by mediating or arbitrating labor disputes. In some cities, however, there are special committees in the chamber which are active in following labor legislation and in improving the administrative ability of the executive staffs of its member corporations by instituting special conferences, courses or institutes in some major branch of management.

The local "employers' association," however, since it is composed primarily of manufacturers, is in a position to have an influence in the practices of each individual plant. While it is impossible to generalize with accuracy, it has been true in the past

that these associations have been largely defensive and repressive bodies. Their policy has too often been one of "anti-unionism," "anti-union shop," anti-picketing," "anti-boycott." And so zealous has been their desire to carry out these purposes that in some cases they have under one guise or another distributed information to their members as to "undesirables," "agitators" and "organizers" who are discharged from the plants of any of their members. To make this "weeding-out" policy truly effective, they have sometimes encouraged their members to employ detectives to identify the "uneasy element," and help to eliminate it.

Clearly this is a negative program. And from a constructive point of view the effects of it have been far from promising. Any rigorously repressive policy such as this, is soon known to the workers of the locality. It becomes an invitation to self-respecting workers to stay away, or else to come in with the deliberate intention of organizing their fellow employees and making vocal their grievances. Both of these things have happened in the past; but up until the last few years the stronger tendency has been for the submissive, timid and docile workers to remain in the majority by a natural process of sifting. There are localities in this country where the deep impress of this "anti" policy has so reflected itself in the employment office of every plant, that it has been a distinctly handicapping influence. The handicap expressed itself in the type of workers who applied for work, in their working spirit, in the attitude of executives and foremen, in the whole labor policy of the plant.

This is the more regrettable because the positive measures which might be taken are so many. The local employers' association can in many places help greatly to consolidate the labor market; yet in times past the tendency has been for employers' associations to confine employment work to the placing of avowedly non-union workers willing to go to aggressively non-union shops.

Much could also be done cooperatively by local employers on such matters as local housing and transportation. Much can be done in the cooperative use of industrial doctors, nurses and special experts to direct training courses; in the teaching of English; in the study of the local cost of living; and in the reduction of local living costs such as rents.

Nearly all of these matters have been thus cooperatively handled in one place or another. It only remains for their use

to become general, and take the place of those furtive activities which foster animosity and fan the flame of class agitation.

But if the local association proves to be persistently unwilling to act in these cooperative directions, the progressive employer's policy may have to be one of independent action. He should, of course, do all in his power to effect changes in the association's policy by "boring from within"; but beyond a certain point of tolerating a policy of which he does not approve, he is clearly justified in resigning and perhaps is even morally bound to. He should then let his position be distinctly known to his workers; and in this way avoid the unfavorable working-class reputation which so usually attaches to the plants of members of employers' associations which are actively repressive in policy and practice.

The Local Trade Association.—There are a number of useful purposes which a local group composed of the employers in one industry or trade can serve, which by their nature general employers' associations cannot fulfill. We shall here refer to such bodies as local trade associations. In the first place they can form the logical group with which local employees in the industry can deal on matters affecting both parties locally. Local hours and wage rates can be kept uniform; working conditions maintained at a reasonable minimum; a common reserve of trained workers, drawn upon and irregularity of work be thus reduced. There are in the printing, textile, boot and shoe, building, clothing and cigar-making trades, for example, an increasing number of local, city or district collective bargains which help to stabilize conditions, level-up labor standards and reduce interruptions of work due to strike and lockout.

Moreover, in cities where there is a large group of employers manufacturing one product, the additional possibilities of further cooperation are almost limitless. The trade association can, for example, join with the community to improve the quality of local education and relate it in useful and interesting ways to the local industry; and to conduct classes for foremen and ambitious workers. It can develop a common technical library in the local public library and local exhibits of processes and products. And it can help in the cooperative purchase of supplies, maintaining of warehouses, development of power plants, use of terminal and transportation facilities, etc.

Some associations are even hiring production experts, cost keeping experts and personnel counselors, to familiarize their

members with the latest procedure in these fields, to help them install modern methods, and to collect production and personnel records which are of comparable value throughout the locality and throughout the industry.

Such a constructive policy requires a little leadership and imagination. But its relation to the spirit and method of the personnel work of each of the cooperating plants is close; and its results are almost inevitably wholesome. But perhaps the most useful service rendered by an active and wisely led local trade association is its demonstration to each employer that there are many problems vital to the right conduct of his plant which can be solved only as they are dealt with by the common action of the local group. Indeed, his trade association activities should show him that beyond the local group of manufacturers in the one industry, there are also other similar groups in the same industry in other parts of the country, to whom he is bound by ties that become more visible as the science of management is understood in all its subtleties, and is projected eventually into a national and then an international dimension.

National Trade Associations.¹—It is only possible here to list and touch upon some of the functions of national trade associations which obviously relate to labor questions. There is not as yet any extensive personnel work in the offices of most of the national bodies; but there are vital points at which their activities might contribute to the adequate handling of employment problems by the individual employer. They can collect comparative wage data, cost of living figures, unit labor costs, labor turnover figures, accident and sickness records and the like.

All the national trade associations have annual conventions of several days' duration, and the educational value of these gatherings is increasingly appreciated. At certain sessions it is customary in some associations to divide the convention into sectional meetings at which different technical problems are discussed by experts. New ideas in personnel management have spread far faster than would have been otherwise possible, because of the opportunity thus afforded to leaders in this field

¹ Examples of bodies of this type are the National Cotton Manufacturers' Association, National Metal Trades' Association, National Founders' Association, American Iron and Steel Institute, The Tanners' Council of America, etc.

to meet large groups of owners and managers face to face in conference; and because employers have been willing and eager to leave their own shops to discuss problems and new methods in terms of their widest possible application.

The proceedings of these conventions are printed and useful ideas thus reach a wide audience in each industry. This educational work is further supplemented in some cases by the distribution of occasional trade bulletins, reprints of pamphlets and the preparation of informational material for trade papers.

The fostering of trade research is a useful function of the national trade group. Nor should the research be confined to problems of process. Ideally, it should be undertaken in all departments of staff management. If, for example, there are processes known to be unduly arduous or harmful to the workers, which could be improved through the use of labor-saving machinery, research for harmless and easy methods should be instituted. It will be readily seen that the work of job analysis in any one plant will tend to uncover a number of problems urgently calling for further study, but which are common to the entire industry and should be studied once and for all by the industry in order that when solved the entire industry may benefit by the improvements. In research work of this sort, moreover, the cooperation of governmental and employee bodies should be sought.

The fostering of cooperative purchasing of raw materials is usually considered a distinctly "business" function; but with the organization of markets for raw materials on a world scale, an industry in any one nation that does not buy economically may be at such a definite disadvantage that the ill effects of this upon the industry's prosperity will immediately affect the workers.

In the same way, the necessity, especially for purposes of foreign sale, of a nationally organized agency, interested in the marketing problem, is becoming widely recognized. And, while the trade association does not usually become a selling agency, its advice and leadership in unifying selling agencies, in reaching foreign markets, in discovering the peculiar conditions of demand in any country, or its special problems of shipment or finance, may be of great value.

The possibilities and economies of standardization of styles, parts, designs, grades and names of materials and products are more fully recognized as a result of war experience than ever

before. While there are wise limits to such standardization as a matter of industrial policy in peace times, it is still true that a strong trade association is essential to efforts in the direction of that legitimate, reasonable and a highly economical amount of standardizing which is desirable. Policies of any sort simply cannot get momentum throughout an industry if there is no organized and organizing agent to keep eternally at work.

Trade associations, as was shown during the war, can also undertake one task which is fundamentally related to regularization of work. They can make and keep current an inventory of the producing capacity of the entire industry. As already pointed out, a first step toward "organizing the demand" for an industry's product is to know the industry's potential producing power—because sooner or later there must be some correlation of that producing power with known needs. In the absence of correlation, production tends to go off at a tangent from demand in a way that invites market disorganization and depression.

Organized contact with governmental bodies on the commercial, legal, mechanical and labor aspects of the industry's problems is another necessary service. The federal government is greatly in need of some one representative group to deal with in every industry, whenever administrative or legislative problems affecting it arise. Issues which relate to tariffs, railroad rates, pending legislation in sundry fields—all call for testimony from those in each industry who really represent it.

When the issue relates to the labor problem, there is a peculiar service of representation to be rendered by the association. The unifying of labor policies and practices is an increasingly necessary condition of an industry's success. Take, for example, the question of uniform cost systems. There are still plenty of plants which offer a price on a contract when they have only the most approximate sort of knowledge of the cost, and which, when producing, are likely to find that their price does not allow them to break even. In order to keep solvent, such firms resort to the obvious economies. They keep poorly equipped plants, pay low wages, offer generally low labor standards and constitute a high proportion of the cases of bankruptcy.

The plant which knows its costs and makes its bid in relation to them is at a conspicuous, if temporary, disadvantage in competing under such conditions. The inducement to maintain high labor standards suffers a temporary set-back. The ignorant

and unscientific management has superficially won out against the better organized plant. *The installation of a uniform cost keeping system throughout an industry is therefore one of the first conditions of assuring every firm's ability to pay decent wages, work reasonable hours and compete at a level where the exploitation of the workers is not the conspicuous attendant condition.* Until every plant is bidding on a basis of price offerings *known to cover the legitimate costs*, an industry's progress is handicapped, and the most egregious exploiters set the pace.

In some industries the policy of uniform cost keeping is carried a step further by the device of the "open price,"¹ under which all firms agree to record at once with the association the price which they are charging for all orders closed. These prices are then assembled in a daily or weekly price list which goes to all members; and any management which finds that its prices are noticeably high can then proceed to study out the causes of its excessive costs.

Another successful method of eliminating that "unfair competition" which has in times past been a demoralizing influence upon the workers within the factory, is to have uniform standards of purity or quality, uniform grading methods, uniform terminology. The worker has always been more or less a party—or at least a silent witness—to employers' questionable methods of labeling, grading, and manufacture. But once a whole industry has agreed upon a certain level of manufacturing standards, this offense against common honesty is greatly reduced.

A special aspect of personnel activity on which there has already been interesting experimentation on an industry-wide scale, is in the field of apprentice training. In at least one industry—the printing trade—a formal apprentice training is instituted with the approval and to a certain extent under the joint direction of the national organizations of employers and workers. There is a training director for the entire industry; courses of study have been worked out; scholarships are provided. This is a good example of the benefits to be derived from developing the administration of one of the fundamental features of personnel administration for the use of an entire industry.

The unification of labor policies reaches its logical culmination

¹ For full treatment of this subject see EDDY, A. J., *The New Competition*.

in a national joint contract with a national organization of the workers. The several forms and methods of national joint industrial organization we shall presently discuss. But long before this point of joint negotiation is reached there are many lines of personnel work which the national trade association can follow. All of them, however, if they are to be pursued with any thoroughness and persistence, require for their execution a permanent secretary of the association, working wholly in the personnel field. Such an official can then become in effect a labor consultant for the industry and for many of the individual members. He can conduct an information bureau as to new experiments in the employment field; he can help factories find suitable executives; he can undertake personnel research; he can know in detail the labor situation of his industry; he can keep current records of its wage scales, hours, etc. In short, he can be to the industry what the personnel manager is to the factory—its staff expert and advisor on personnel problems. Where conditions are ripe he can, finally, be the means of bringing representative groups from the employers and the employees of the industry together for joint consideration of their common problems.

The case for the national trade association needs no elaborate arguing. But it is altogether in place to point out the statesman's role which such bodies can play in industrial relations work, if only the possibilities are appreciated.

We recognize, of course, that the employers of any industry when once organized may adopt an illiberal attitude toward personnel administration. They may maintain a defensive attitude toward production exactly as the labor unions have tended to. They may prefer to dwell upon conflicts of interest rather than upon points of common interest with the employees of the industry. We see less likelihood of this happening in the future than in the past, however, in the light of the present wide interest in positive and preventive measures. But a conservative organization is probably better than none, for it offers the foundation for future building. And our analysis will have been singularly unsuccessful if it is now not clear that *the maximum degree of nation-wide organization on the part of both employers and workers is indispensable to a scientific and sound industrial future.* Until the point is reached where the employers of an industry are at least 75 per cent. organized

throughout the nation,¹ and the employees are organized to a like degree, the industry is not ripe for those developments of industrial government which alone will bring a reasonable stability and maximum productivity to the industry.

Speaking of the potential significance of strong organizations of workers and employers the now famous Garton Foundation Memorandum says:

“Yet the possibilities of combined action which lie in these two great groups of highly organized and powerful bodies might transform the whole face of industrial life. Their united knowledge of both sides of the industrial process should enable them to throw light on every phase of its successive developments. Their united strength would render them, in combination, practically irresistible. But to secure the realization of these possibilities the cooperation between the two groups must be continuous and constructive, and must be based upon a recognition of the common interests of employers and employed, both as parties to industry and members of the community. Employers must realize that both their own interests and the obligations of citizenship impose upon them the necessity of a sympathetic understanding of the lives and standpoint of those with whom they work and a willingness to cooperate, without dictation or patronage, in every endeavour to improve their material or social conditions. Labor must realise its direct interest in the improvement of industrial processes, the organization of industry, the standard and quantity of production, and the elimination of waste in material or effort. Both the Employers' Association and Trade Unions must learn to regard themselves as joint trustees of one of the most important elements of the national life.”²

Other National Associations.—The general national associations of employers aim largely to educate employers and public opinion. There is in this group the National Manufacturers' Association which interests itself in broad questions of industrial policy in relation to the government, the workers and the consumer.

There is the League for Industrial Rights which is devoted to a consideration of the legal phases of the relations of employers and employed.

The United States Chamber of Commerce, especially through

¹ This should mean 75% of the total volume of production as well as 75% of the total number of employers.

² Garton Foundation Memorandum on The Industrial Situation after the War, reprinted by U. S. Shipping Board, Emergency Fleet Corporation.

its industrial relations committee, attempts to crystallize employers' opinions on broad industrial policies and on specific matters of pending or proposed federal legislation.

The National Industrial Conference Board is a research body composed really as an association of trade associations, for carrying on elaborate studies of pertinent issues in the whole personnel field. And there is the National Civic Federation, not strictly an employers' association, but one in which they are largely influential. Its purpose is to provide a common meeting ground upon which the representatives of "capital and labor" of the nation can come to a better understanding of the labor problem and of each other.

Conclusion.—Employers' associations offer large opportunities for constructive service in the next ten years—especially those trade organizations in which employers are brought together by their common interest in the same industry. The day has obviously passed when such groups by repressive measures can gain advantages which are either temporary or permanent. The cause of truly scientific management has already been too greatly prejudiced by the tactics of those few employers in such associations who are more interested in "fighting things to a finish," than in building up an organization for the management of personnel which will really cope with that elaborate problem.

The strategic move of associated employers in the next few years is rather in the direction of getting all the positive gains possible out of cooperative action. Happily, all the external influences are combining to make trade associations not only useful but indispensable. For in strong employers' associations, ably led and mindful of the business value of a liberal policy, lies the hope of amicable and economical transition to a basis of conference with workers who are likewise widely organized. Industry is, if it but knew it, seeking a basis for the joint effort of managers and manual workers who shall organize each industry on a scientific footing and with a social purpose.

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CHAPTER XXXIV

NATIONAL INDUSTRIAL COUNCILS

A national industrial council, as the term is used here, means a joint standing body equally representative of the nationally organized employers and workers of an industry. The term is an English one and was applied originally to bodies so constituted in a number of English industries. We have throughout this volume studiously avoided the use of illustrations of industrial procedure from other countries, realizing that conditions on the two continents are never completely analogous and that any proposal must always be modified to suit local needs. But in this instance we believe a brief exposition of the English movement with the reasons for it will be in point, since we find those reasons so largely duplicated in this country, and since also the beginnings of an almost identical movement are already discernible here. American managers can, we are therefore confident, learn much from the success and limitations of the English development.

The English Councils.—As early in the war as March, 1917, a sub-committee of the Reconstruction Committee, later the Reconstruction Ministry, presented to the War Cabinet its First (Interim) Report on Joint Standing Industrial Councils. This report recommended:

“The establishment for each industry of an organization, representative of employers and work people, to have as its object the regular consideration of matters affecting the progress and well-being of the trade from the point of view of all those engaged in it, so far as this is consistent with the general interest of the community.

“With a view,” the report continues, “to providing means for carrying out the policy outlined above, we recommend that His Majesty’s Government should propose without delay to the various associations of employers and employed the formation of Joint Standing Industrial Councils in the several industries, where they do not already exist, composed of representatives of employers and employed, regard being paid to the various sections of the industry and the various classes of labor engaged.”

“It is not enough to secure cooperation at the center between the national organizations; it is equally necessary to enlist the activity and

support of employers and employed in the districts and in individual establishments. The National Industrial Council should not be regarded as complete in itself; what is needed is a triple organization—in the workshops, the districts and nationally.”

And in order to get the proposed functions of these councils clearly before us we quote also the following:

“Among the questions with which it is suggested that the National Councils should deal or allocate to District Councils or Works Committees the following may be selected for special mention:

(i) The better utilization of the practical knowledge and experience of the workpeople.

(ii) Means for securing to the workpeople a greater share in and responsibility for the determination and observation of the conditions under which their work is carried on.

(iii) The settlement of the general principles governing the conditions of employment, including the methods of fixing, paying, and readjusting wages, having regard to the need for securing to the workpeople a share in the increased prosperity of the industry.

(iv) The establishment of regular methods of negotiating for issues arising between employers and workpeople, with a view both to the prevention of differences, and to their better adjustment when they appear.

(v) Means of ensuring to the workpeople the greatest possible security of earnings and employment, without undue restriction upon change of occupation or employer.

(vi) Methods of fixing and adjusting earnings, piecework prices, etc., and of dealing with the many difficulties which arise with regard to the method and amount of payment apart from the fixing of general standard rates, which are already covered by paragraph *iii*.

(vii) Technical education and training.

(viii) Industrial research and the full utilization of its results.

(ix) The provision of facilities for the full consideration and utilization of inventions and improvement designed by workpeople, and for the adequate safeguarding of the rights of the designers of such improvements.

(x) Improvements of processes, machinery and organization and appropriate questions relating to management and the examination of industrial experiments, with special reference to cooperation in carrying new ideas into effect and full consideration of the workpeople's point of view in relation to them.

(xi) Proposed legislation affecting the industry.”¹

¹ For all the earlier documents in connection with the Council movement, see *The Industrial Council Plan in Great Britain*, compiled by the Bureau of Industrial Research, New York.

At the time this report was submitted, industrial unrest and tension in England were acute. And it seems to have been the Government's conclusion that favorable action on the report would relieve the tension. The Ministry of Labor was therefore empowered to proceed with the calling together of such councils in those industries where both sides were strongly enough organized to provide a substantial nucleus to work with. Beginning gradually, the organization of standing councils has gone on until now it has spread to over fifty industries in which are included over three million workers. And the extension of the movement is by no means at an end. England has, indeed, proceeded to apply an idea which has real vitality and potentially great significance in the structure of industrial government.

Reasons for the Movement.—Clearly, the idea of a joint national industrial council did not emanate fully developed from one person or group; nor did it get its momentum wholly by virtue of its inherent logic or wisdom. There had been a play of minds and forces to get the idea into practical politics; several urgent reasons combined to make it flourish.¹ The urgency of these reasons lies in economic conditions which are not peculiar to Great Britain.

England wanted, and still wants and needs, high productivity. She cannot get it with industrial conflict, ca-canny, sabotage, limitation of output and strikes, rampant throughout the land. She cannot get it under a competition which ignores quality, which creates high charges for competitive selling abroad, which allows the least efficient manufacturers to dictate the terms on which an entire industry shall employ its workers. In other words, the demand for large output and low unit costs creates the first reason for agreeing upon a "get together" policy.

The councils promise to create under them a peaceful conference method of adjusting differences. This is more economical than appeals to force; it is more sensible; if properly used, the method may prove more satisfactory and more fruitful for all parties. The workers, if they find that their share in control is a vital and increasing share, will be disposed to favor negotiation instead of strikes.

¹ For analysis of similar prior proposals see TEAD, ORDWAY, *British Reconstruction Programs, Political Science Quarterly*, May, 1918.

Also, WOLFE, A. B., *Works Committees and Joint Industrial Councils*, pp. 36-40.

Again, an industrial council can eliminate the worst forms of competition. It can help to standardize styles, parts and designs to a reasonable degree. It can begin to create an opinion which will eventuate in the abolition of private monopoly in raw materials and in the abuse of patent rights. It can assure that the competition shall be for quality of goods, and not for mere cheapness of price at the expense of the human standards of the industry. That is, it can level up and approximately equalize the conditions and terms of employment throughout an industry.

All of these reasons for adopting councils hold also with almost equal force in respect to American conditions. But are the broad outlines of the proposal itself suitable to meet American needs? Careful analysis of the details of the plan is needed before judgment on this point can be finally made.

First, the council is *not* primarily an adjudicative body; nor is it formed under a "collective bargain" terminable at a specified date. The agreement takes the form of a permanent instrument. It is virtually a constitution, a body of basic law governing the scope and method of joint procedure in an industry. This should mean no loss of flexibility in determining labor standards; it simply means that demands for changes in the terms of operation are to be considered with a minimum interruption of work and a maximum use of orderly parliamentary conference, as provided for under the terms of the basic understanding.

Second, the council and all agencies subsequently created under it recognize flatly in their composition the principle of equal representation for the two parties—organized employers and organized workers. Far from there being any question about the legitimacy or value of organization on either side, it is seen to be essential to any integrated, intelligently conceived plan. Indeed, so necessary is it for the success of the larger purposes of the council idea that the representation shall reflect the entire industry, that some form of enforced membership in employers' and workers' organizations was seriously proposed in England. The pottery industry, which was the first to assemble under the Council plan, said explicitly that either

"(a) The State should give the force of law to the determinations of a joint committee . . . or

"(b) Membership in Trade Associations and Trade Unions should be compulsory by law on all eligible for membership."

This demand is significant, even though it may not be immediately acted upon in England and would hardly even be put forward at the present time in this country. But it shows that both sides when partially organized recognize the necessity of complete integration. That necessity will now be more and more widely seen, and inclusive membership on both sides will thus be virtually enforced by the pressure of the economic situation.

Third, as a necessary attendant of this full joint representation is the power to decide upon many more matters than the usual "wages, hours and conditions." Inevitably, as both sides have the capacity and the power which a comprehensive industrial association brings, they will desire to confer over a wide range of problems. Specifically, the English plan as shown above contemplates consideration jointly of methods of conference and shared responsibility, methods of settling disputes, training, research, introduction of improvements, proposed legislation and the like. This widened basis of negotiation has two values, the one educational for managers and workers concerning their common problems, the other more directly practical, since it is becoming clear to the most reluctant that all the details of shop management which affect the workers are only settled satisfactorily—are only settled in a way that makes harmonious operation possible—when the workers are consulted regarding the acceptance of those details. And the extension of the conference method is hopefully regarded as meaning a better spirit and a more intelligent cooperation in carrying on the industry's affairs.

Fourth, there is the value in the council plan that it does not desire to centralize all power and authority. It seeks deliberately to get district, local and shop groups to undertake responsibility for problems relating primarily to those smaller groupings. It invites decentralization. Indeed, it must, if the support and interest of the individual workers are to be permanently secured. In short, the principle of function is adopted, and each body is expected to assume jurisdiction over those matters concerning which it, and it alone, is informed, specially interested and competent to decide.

It will be seen from this analysis that the idea has been carefully worked over; and that the plan is calculated to meet the tests of practice. Nevertheless it is still far from perfect and careful consideration of its limitations is necessary. For it is precisely these shortcomings which can be profitably avoided

by managers in America who decide to undertake any sort of national joint conference.

Limitations of the Council Idea.—There is, first, no recognition of an active public interest in the deliberations of the council. Only two of the parties are given voice—the employer and the worker. Neither the direct consumer nor the general community interest is represented. If the idea of representation of divergent interests is to be applied, it should be consistently applied; and not leave the important consumers' and the public's regulative interests ignored and without voice. If adjustment is to be reached by securing a balance of forces—by securing a temporary equilibrium of groups which are still trying to find a common purpose on which to build—the likelihood of a stable and equitable adjustment is greatest when every possibly disturbing factor, every vital interest, is allowed free expression and consideration. There is the danger, as the English Fabians point out, “of exploitation of the community by combinations, *i.e.*, of employers and workers of a trust character whose objects might include the forcing up of prices.”

Second, there is not any explicit recognition that standards of a “fair” day's work and a “fair” day's pay are necessarily *progressive* and not static standards. Needless misunderstanding and ill-will arise in industry through the present failure of one side or the other to see that “reasonableness,” “just compensation,” and “efficient workmanship” are concepts as relative as the term “nearness” when applied to the stars. Industrial constitutions will be in danger as long as employers, for example, do not realize that the workers' demands are not necessarily going to stop at some fixed point. Their desire for shorter hours, higher earnings, better shop conditions, for more voice in controlling price and output, promises to assert itself for some time.

And if in that situation the time arrives when to satisfy the claims of the head and hand workers, there must come a shift in the proportion of the total income which goes to capital holders, it must be understood by all that we are in a fluid, transitional, economic era. Either the workers of the head and hand will assume fuller and fuller control of industry by the orderly means which these councils provide; or they will try to get it in some other way. And we do not get a sense in the English movement of any adequate appreciation by those involved of the fact that the present underlying basis of relationship between employers

and workers with the present private ownership of capital, and the present direction of productive energies by the holders of credit, is itself not necessarily ultimate but may be on its way to changes not clearly seen by any of us.¹

In the third place, as the English radicals of the "left" have pointed out, the council scheme definitely fails to include the purchase and allocation of raw materials as one of the matters for joint determination. As an immediate proposition, that omission is probably politic and discreet. But no one can watch the increasing role which transportation, coal, iron, food, cotton, wool, copper, hides and rubber—to mention only some of the most obvious commodities—play in industrial affairs and international destinies, without getting an uncomfortable impression that to consider industrial relations without considering where the raw material is coming from, how much it costs, where it is going and what use is to be made of it, is like trying to solve an equation in which the crucial factors are unknown. Sooner or later there will come from the workers an irresistible demand to be admitted to deliberations where decisions affecting raw materials are being made. And with that slight but far reaching addition to the statement of joint powers will come an accumulation of responsibility and power for the council which will raise it to a place of determining influence in industry. For when jurisdiction does extend to raw materials, the need will be clear for a gradual coming together of councils into what will eventually be a National Industrial Parliament.

Finally, there is the objection voiced by the more "radical" labor union groups that the plan is altogether too temporizing; that it does not "go far enough;" that while the plan professes to provide "means for securing to the workpeople a greater share in and responsibility for the determination and observance of the conditions under which their work is carried on, it did nothing to provide for or definitely suggest such means;" that even if it did provide such means, the primary efforts of the workers on the councils should be "to press vigorously the movement to secure for labor control of production and industry."

Convinced of the soundness of these objections three of the most influential unions have thus far refused to share in institut-

¹ A conspicuous exception to this statement is to be noted in the case of the building trades. See *The Industrial Council for the Building Industry*, by the Garton Foundation, London, 1919.

ing councils in their industries—railroading, mining and the engineering or metal trades. Both the railroad and the mine workers contemplate a plan of government ownership of the physical properties together with operation by a directorate on which the executive workers, the manual workers and the public are equally represented. There would be little point in delaying our discussion of the application of this whole idea to America, if it were not true that America promises to be presented in the next few years with an identical spectacle of certain strong unions in the “aristocracy of labor” pressing for an arrangement of government ownership and a representative management of industries like railroading and mining. Joint control in councils of *private* owners and workers is in these cases looked upon by the workers with considerable suspicion.

The Council Idea in America.—There is, nevertheless, apart from these few industries where the workers have come to see what they believe to be a wise objective and have power enough to get it considered, the germ of something useful for America in the council idea. The national labor unions can do much in effecting local agreements and universalizing wholesome labor standards. The national trade associations can do much to further the prosperity of their industries. But there are many problems which the two groups have in common whose solution is to mutual advantage, but which cannot be confidently secured without joint action.

There was under the admittedly exceptional conditions of the war, an unprecedented degree of joint action between employers and employees on a national scale, which while it perhaps proved nothing for peace times, was indicative of possibilities. In shipping, longshore work, shipbuilding, building, harness and saddlery work, railroading and coal-mining, there were during the war national collective agreements (or understandings which amounted to the same thing) under which it was provided that there should be no interruptions of work until after the action of some agreed arbitrating agency. On the whole these agreements were astonishingly successful in accomplishing their primary purpose of assuring continuous work. And they offered at the same time a convincing object lesson of the sound logic and benefit of occasional national conferences between the leaders of the employers and the workers of an industry. Happily, it is likely that a method of negotiation hit upon for war time use, will in several industries be continued.

The council idea, however, as already pointed out, does not involve initially the creation of an adjudicative body so much as of a conference organization. And proposals for such conferences are under advisement in the United States in several industries.¹ At least six industries—the printing trades, the men's clothing industry, the building trades, longshore work, ocean marine and harbor marine operation—have either come together or are considering coming together in regular conference under definite written agreements.

In the printing trades, the International Conference Council for the Printing Industry and Allied Trades is already an accomplished fact. It is composed of ten members; five chosen by the several employers' associations involved, five chosen by the first international unions which are parties to it. Meetings are held on call; a "unanimous vote is necessary to carry any resolution involving the establishment of general principles affecting" any of the parties to the agreement; and all expenses are borne jointly.

The preamble well sets forth the spirit and purpose underlying this cooperative effort:

"Only through joint conferences in the spirit of mutual helpfulness between employees and employers can the foundation be laid for stable and prosperous conditions within the printing industry. To promote the spirit of co-operation and to deal with the problems of the industry in a way to insure the protection of the interests of all concerned, the establishment of an International Joint Conference Council, made up of representatives of employers and employees, which shall be thoroughly informed as to conditions and interests of all parties in the industry and in a position to suggest for ratification regulations which shall eventually become the law of the industry, is considered essential.

"Compulsory arbitration by law is deemed impracticable as a means of adjusting controversies between employers and employees. Controversies between employers and employees can and should be adjusted through voluntary agreements to refer disputes to boards on conciliation and arbitration composed of representatives of employers and employees in the industry affected. It is in this spirit of arbitration and conciliation that the organization and operation of a Joint International Conference Council for the Printing and Allied Trades is undertaken."

¹ A movement as contemporary as this cannot of course be treated satisfactorily here, so rapidly do events occur. It is not unlikely that by the time this book is published several of the proposed bodies will have become a fact, and similar bodies have been proposed in other industries.

This being the first council to be instituted in America it is interesting to state in full the scope of its activities, which are:

“(a) Outlining of general trade policies which will secure the greatest degree of co-operation between employer and employe and at the same time insure full protection of the interests of the public.

“(b) Consideration, reporting and advising on any legislation affecting the trade.

“(c) Studying and proposing methods for securing uniform working hours and shop practices.

“(d) Co-operation with those departments of the Government exercising jurisdiction, to maintain such selling prices as will insure a reasonable remuneration to both employers and employes.

“(e) Consideration and review of the causes of any disputes which arise in the Industry. All conciliation and arbitration processes covered in existing agreements must be exhausted before appeals are taken to the International Council. Where no arbitration or trade agreements are in effect, appeals may be taken through regular recognized channels to the International Council.

“(f) Investigation of the question of apprenticeship conditions; adoption of suitable methods of selection for apprenticeship, and the technical training for apprentices, learners and journeymen throughout the industry; the improvement of processes, designs and standards of workmanship; to seek adequate representation on the control and management of all technical institutes; to consider and report upon all improvements of processes, machinery and organization, and appropriate questions relating to management and the examination of industrial experiments, with special reference to co-operation in carrying new ideas into effect, and full consideration of the employes' point of view in relation thereto. The better utilization of the practical knowledge and experience of employes, with provision for facilities for the full consideration and utilization of acceptable inventions and improvements designed by employers or employes, and for the adequate safeguarding of the rights of the designer of such improvements.

“(g) Determination of practicability of establishing wage adjustment boards throughout the industry.

“(h) Consideration of any matters of general interest to the trade, whether industrial, educative, economic, legislative or hygienic may be taken up.”

The relation of the council to the trade associations, the unions, the local employers and “chapels”—organizations of workers in one shop—is clearly defined and wise provision is made to keep the policy of the central body in complete harmony with the real sentiment of the entire membership of the industry. The specific provisions calculated to do this follow:

“(a) Each side shall submit its bill of particulars for action in the form of resolutions, which, after having been unanimously passed by the International Council, shall be submitted for ratification to the constituent bodies of the organizations, parties to this agreement. Resolutions passed by the International Council and ratified by the constituent bodies of the organizations, shall be binding upon all parties to this agreement and shall become the law of the trade.

“(b) For the purpose of carrying out the intents and objects for which this International Council is formed, local unions, chapels and shop committees affiliated with the respective International Unions, parties to this agreement, local allied printing trades councils and local associations of employers in the respective trades dealing with the unions under this agreement, shall be recognized as proper and legitimate agencies through which the International Council is to function.

“(c) It shall be the right of any of these local groups of printing trades, employers and of local groups of employees to submit to the International Council for consideration and action any proposal of mutual interest, provided, however, such proposals will not violate the legitimate processes and relations in existence between local unions and respective international unions or be in conflict with existing agreements.

“(d) That all local agreements hereafter entered into between local unions and local employers shall be underwritten and guaranteed by the International Union having jurisdiction over the particular trade making such local agreement. In the event that any local union or local employer violates or disregards the terms of this agreement the action of such recalcitrant union or employer shall be publicly disavowed by this International Council and the aggrieved parties shall be furnished with an official document to that effect.”

An editorial in the *Typographical Journal*, the union organ, well summarized its analysis of the project when it said, “In short, representatives of the employers and the employes have agreed to a definite plan for cooperation to the fullest extent in an earnest effort to place the commercial printing industry on a sound foundation and to keep it there.”¹

It is, of course, too early for any results of the work of such a council to show. But it is exceedingly significant to see in what a businesslike way the agreement is drawn; what a useful reinforcement to the best in collective bargaining it supplies; what a permanent agency of conference it offers—for the agreement is perpetual unless one or another party gives six months' notice of withdrawal.

¹ Quoted in *The Survey*, June 28, 1919.

Men's Clothing Industry.—In the men's clothing industry there is now instituted a National Industrial Federation of Clothing Manufacturers, and a joint national arrangement with the Amalgamated Clothing Workers of America has been contemplated. There is already a National Board of Labor Managers of the industry, composed of the labor experts of the employer's associations in five of the big garment centers; and the proposal is for a council to be in the first instance a group which brings together these five and an equal number of union officials under the title of the National Joint Council of the Men's and Boys' Clothing Industry. Whether or not this council will be immediately constituted, cannot at this time be stated.

The publication of the New York clothing industry says, however, of the plan for the employers' federation: "Only a year or two back, had such a federation been possible, it probably would have been so almost entirely in an aggressive, or rather defensive sense. But the new federation—although, of course protective of its members' rights—in its essence, its spirit, its conception and intent, is for unity and amity in all future labor arrangements, which, it is believed, inevitably must standardize and stabilize the labor conditions, and so the future of the industry."¹

Anyone at all familiar with the highly competitive character of the garment trades, a condition accentuated by the small amount of capital required to set up as a manufacturer, will realize that if an industry of this type can begin to effect a national joint organization, it is a possible thing for any industry. For not only has this been a small scale industry but it has been distributed over a number of scattered cities and has usually worked on a narrow margin of profit.

The Building Trades.—In the building trades while no joint industrial council exists, there has been created a joint body out of which in time it is not unlikely that a genuine council will emerge. It is the National Board for Jurisdictional Awards in the Building Industry which consists of eight members:

"Three selected by the Building Trades Department of the American Federation of Labor, and one each by the American Institute of Architects, the Engineering Council, the Associated General Contractors of America, the National Association of Builders' Exchanges, and the

¹ Quoted in *The Survey*, July 26, 1919.

National Building Trades Employers' Association. Members are to serve for two years. When a dispute arises an appeal is to be taken to the board and the work is to continue with whatever workmen the employer may select, pending a decision. This may mean that in the individual case involved the men eventually shown to be entitled to the work will lose the job altogether. The effect of the award, however, will be to settle that particular problem, and eventually a body of jurisdictional law will have been built up which will govern the assignment of work. This process will be expedited by the fact that architects hereafter will write into their specifications such awards as may apply to the work contemplated. It is a part of the agreement that local unions that do not abide by the decisions of the board shall be suspended and the international union affected shall proceed to man the job. Architects, engineers or employers belonging to any of the organizations involved in the agreement are to be suspended if they fail to observe the rulings of the board. A two-thirds vote will be required to render an award. If such a majority vote is not secured the case is to be referred to an umpire to be selected by the board, or if it fails to agree by a two-thirds vote upon an umpire, the secretary of labor of the United States is to be called upon to name him. The decision of the umpire is to be final."¹

While it is true that this board is at present concerned especially with jurisdictional disputes between the several unions in the building trades, it is a body which may naturally be the germ of a joint conference on other matters.

The Marine Trades.—Conferences in the marine transport industries held in the middle of 1919, proceeded to a point where in the case of the seamen and licensed officers and the ship owners, committees have been at work on agreements which may possibly lead to the creation of policy determining and adjudicative machinery. The Seamen's Journal, the workers' publication, says of the proposal:

"The council should not interfere with or in any way assume to restrict the freedom of action of seamen or shipowners. Both parties should reserve all preexisting rights of action, individual and collective. The sole obligation of membership should consist in an agreement upon each part to advise with the council in any and all matters affecting the joint interests.

"It may be said that a body so formed would be powerless to do more than create discussion. This, however, is in reality an advantage. With free discussion there is little doubt that agreement would be

¹ *The Survey*, July 12, 1919.

reached on many matters now in dispute. The proceedings would develop a sense of mutual confidence and responsibility. Partisanship would give way to partnership, with a consequent improvement in the attitude of seamen and shipowners toward each other and a better sense of joint responsibility for the conduct of shipping affairs.

"The council should be created by law. To that extent it would be a public body. In every practical sense it would be a private organization, with membership limited to the parties immediately involved in the conduct of shipping."

In the case of the longshore workers an agreement was reached in September, 1919, to reconstitute the National Adjustment Commission which was active during the war. The preamble to the agreement states that "in order that the spirit of mutual responsibility and helpfulness with which employers and employees engaged in the loading and unloading of vessels, and who cooperated with the Government in meeting the exigencies of a war time situation, may find permanent expression," a National Adjustment Commission shall be established. While this body by no means exemplifies the essential features of an industrial council, it is an important step in that direction; for its work is to "be responsible for and have jurisdiction over industrial relations so far as they affect loading and unloading operations done under the control or on account of signatory parties or parties which may subsequently join in this agreement."

There is also in the agreement, however, the following provision which will undoubtedly be taken advantage of as time goes on:

"For the consideration of matters touching the interests of all ports and the longshore industry in general, the several alternates named to serve on the National Adjustment Commission as representatives of the interests previously enumerated, together with the advisory members, may upon occasion constitute a General Dock Council.

"The functions of the General Dock Council shall be purely advisory and recommendatory, looking toward the largest measure of joint action between employers, employees and the Government in the development of maritime commerce and for promoting the legitimate interests of all engaged therein. To this end it may give consideration and make recommendations with respect to the standardizing of working conditions, the regularizing of employment, the establishment and enforcement of general standards to insure health, safety and efficiency, the cooperation with adjustment agencies in other industries in matters of common interest, and the representation to the Government of the needs of the industry."

In the branch of the marine industry devoted to the operation of harbor craft there is proposed the National Harbor Industrial Council whose general scheme of organization and functioning are practically the same as for the longshore craft.

It is idle to speculate about the possible success of these several agencies, but it is not without importance to see how closely they parallel the English plan; how carefully they plan to keep in touch with all local groups; how urgently the need for a hierarchy of organization from shop through locality and district to national bodies is held in view.

Warning on one point, however, cannot be too strongly given. The council should avoid functioning as an arbitrator. It should confine itself to bringing the parties together, to supplying information, to offering dispassionate counsel to all. As soon as it tries to decide the rights and wrongs of specific cases, it becomes involved in local quarrels; and the chances of its having the continued respect of whichever party happens to feel temporarily aggrieved by decisions, are reduced.

There is another lesson from the English experience which is not to be forgotten. The method of voting in the council should be such as to require a substantial majority of *both sides* to assent to a proposition before it is adopted. That need not mean that each side votes as one unit; only that there is virtual unanimity as to the advisability of every course of action adopted.

A further word of emphasis may well be added to what the paragraphs quoted above indicate as to the *scope* of the conference dealings. While certain subjects are listed for consideration, it must eventuate in practice that *every* subject connected with the industry may under the council scheme, come to the attention of the conference. We have already indicated in several places, for example, that these councils can perform a signal service in the way of regularization of work and in the direction of a sound organization of the demand for the product. And one reason why we are hopeful that industry-wide joint organization can begin to make this stabilization possible is because all the subtle elements of the regularization process may come under the scrutiny of the council. Workers and managers alike, both with a direct interest in steady work, can together agree upon a course of action which neither alone could or should attempt. And it is just so with all the other matters before the councils. It is because they are *joint conferences*

that there can issue from them proposals and decisions which look in the direction of benefiting the condition of all who are parties to the industry.

To those who have been inclined to accept the view that the labor problem is in one aspect a problem of the government of industry, it will appear readily enough that we have in industrial councils a logical elaboration of the governmental structure of our economic life. Industry has in these councils a body of such representative character, that it can naturally consider the questions which affect an entire industry. They become the parliaments of the several industries. They can function as the mouthpiece and administrative agency of industries, in dealings with governmental bodies and consumers.

And just as surely as the single councils have any justification, a *council of councils* will come logically to be demanded—a national economic conference whose possibilities are still a matter for speculation. Such a body, we can imagine, will play an important part in relations with the International Labor Commission created by the peace treaty and with whatever official international economic bodies come subsequently into being.¹

Further Objections.—A wholly erroneous idea will have been conveyed if it is understood that we favor the adoption of councils identical in every particular with those of England. We have already cited several important objections; and it is well to summarize our conclusions further.

The omission of consumers from such councils seems to us a serious defect. We recognize that consumers are in this country poorly organized, *as* consumers; and in the absence of such organization, we admit that only less effective expedients are at hand. But the immediate expedient of having a number of "public" representatives is better than nothing. Such delegates (equal in number to the employer and employee members of the council) might, for example, be chosen by the Secretaries of Commerce and of Labor jointly; or by the two sides in conference; or in whatever way it was felt that a high minded and enlightened representation of the public and consuming interest would be assured. But the principle of the representation of the consumer is sound, and is a needed corrective to the possible conspiracy of employer and employee against the consumer.

¹ Further discussed in TEAD, ORDWAY, *The People's Part in Peace*, Chapters V and VI.

At the outset in this country, such conference bodies should have only the power which derives from moral suasion and the winning power of a sound and economically beneficent idea. The initial work of industrial councils must necessarily be educational of the constituencies on both sides. This must precede more determinative action. Moreover, only as a large per cent. of employers and of the workers feel that they are really represented in the council can it proceed to anything resembling serious administrative work or advance to policy determination which is anything but advisory in a most general sense.

The present weakness of the two participating associations in so many American industries will be pointed to by some as an insuperable defect. Councils require, it will be said, that the labor unions in an industry be very strong. There is no escape from this conclusion. Yet in the absence of anything approaching 100 per cent. organization, much can be done through the use of delegates of employees' associations and shop committees. In our judgment, however, the definite encouragement of strong national organization on both sides is a definite business asset to each individual firm.

One may object that the workers' national organizations have this or that defect; and the objection may be all too true. But there is nevertheless a general law of economy in the growth of institutions which applies here as elsewhere; a law which says that any institutional changes have to start from the conditions and institutions of the moment, and that society has in consequence to commence its reforms with groups as they are rather than with them as it wishes they were. This will, we believe, prove substantially true of the national labor groups of today. They have their admitted defects; but unless they exhibit a lack of responsiveness to new conditions which has not before been apparent, they are the bodies through which the workers' end of the councils can confidently be counted on to develop. And judging by the progress thus far made in the consideration of the council idea by American industries, the serious obstacles to joint organization are not being raised by those on the workers' side.

There may, finally, arise an objection that industrial councils mean the injection of "politics" into industry. Such an objection would indicate a fundamental misunderstanding of the

purpose of the council; but it should be carefully considered. What this presumably means is that issues will be decided not on their merits, not scientifically, but because of more or less covert personal influences. It means a fear that red tape, bureaucracy and delay may enter industry; that the indecision and cumbersomeness of operation which appears to characterize so much of governmental action, may appear also in business.

Industry must indeed be protected from "politics" so defined. To contemplate industry ridden with this sort of "politics" must seem to every serious administrator a veritable nightmare. And there is, unquestionably, a real danger that such tendencies will grow in influence. But their growth, we are clear, will not be due to industrial councils or to any other form of cooperative action among the interested parties. It will be due to the absence of such cooperation, due to the difficulties inherent in large-scale management; due to the demand for standardized, cut-and-dried performance which the nepotism of inherited ownership invites as the cloak with which to cover its inefficiency. It will be due, as it already is in the government, to the fact that the directly interested parties are *not* sharing in the determination of working methods and terms of employment, and hence are unable to bring easily to light and have discussed and corrected the evils, stupidities and inefficiencies of bureaucracy. "Politics" in its bad sense industry has no room for, if it wishes to become truly productive. But politics in the sense of study toward a structure intelligently devised for effective, autonomous control, representation of the actively interested parties and determination of policy on a basis of voluntary consent, industry not only has a place for, but *it cannot get on without*.

It may have seemed to some that our constant use of governmental analogies in discussing industrial questions is somewhat strained. But it is daily clearer to those who are watching closely the play of economic forces, that the problem of problems today is to find out how our economic and industrial life can be lived in harmony with those principles of political freedom and autonomy which are our proud, national birthright. And broadly speaking it is true that until our country is prepared to realize that industry is a proper sphere for democratic government—ultimately for genuine self-government—most rapid progress will be blocked, because vision and purpose are inadequate.

Councils in the Civil Service.—The idea of joint standing bodies is obviously applicable to the relations of federal employees with the federal government. In Great Britain, where the extension of the council idea into the civil service has now resulted, it is agreed that the four following important purposes can be served by such a joint council for government employees:

"1. Provision of the best means for utilizing the ideas and experience of the staff.

"2. Means for securing to the staff a greater share in and responsibility for the determination and observance of the conditions under which their duties are carried out.

"3. Consideration of the general principles governing conditions of service, *e.g.*, recruitment, hours, promotion, salary, and superannuation.

"4. The encouragement of further education of civil servants and their training in higher administration and business organization."¹

There is as much reason for this type of organization here as there is in England. The problem of industrial relations with federal employees and, indeed, with state, county and municipal employees, is certainly no easier than the same problem in "private" plants; and it is frequently complicated *in the absence of adequate channels of joint conference*, by the unwholesome interference of politicians in affairs of the public service. And this interference while it may effect an immediate settlement of certain issues like pay and hours, does not tend to strengthen the morale of the service, its efficiency or its goodwill toward the federal government as employer. It is in truth an injection of "politics" in the invidious sense above referred to.

For these reasons, the proposal of joint councils to supply a place for the joint deliberations of governmental administrators and the personnel whose action they direct, is not to be summarily dismissed. A council here promises exactly what it promises in other industries. It promises to pave the way for more enlightened personnel policies, for a greater development of interest in the industry by the workers, for a better basis of mutual understanding and confidence than can ever exist so long as no national joint agency is present.

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CHAPTER XXXV

THE PURPOSE OF INDUSTRIAL GOVERNMENT

The government of industry presents a problem of economic and human relationships vastly more complex than that found in the field of so-called political government. This affords perhaps the best possible justification for our drawing as heavily as we have upon the political wisdom and experience of the past. For we have throughout this volume been relating political truths to industrial problems wherever comparable situations could be discovered. We have been enlarging upon one important administrative detail after another, estimating proposals and procedure in the light of a growing knowledge of the characteristics and potentialities of human nature, and of a growing experience in politics and in personnel management.

In America's political tradition certain aims and purposes have come to have a high, if not a supreme, value. We in this country hold it as "self-evident" that "all men are created free and equal"—in the sense of having the right to equal opportunity. We hold that the right to life, liberty and the pursuit of happiness are under ordinary conditions inalienable rights. We cherish a faith on which our political structure is built, that life and happiness are best assured when there is government of the people, by the people and for the people.

There is an unparalleled fineness about America's tenacious hold upon these aims and ideals. That we have not done more to realize them than we have, is indeed cause for discouragement and heart searching. But one conspicuous reason has certainly been that as a people we have been groping toward practical methods, have been experimenting with and choosing forms which seemed most readily adapted to realizing the democratic spirit; and the end of that period of search and choice is still far in the future.

There is, we shall probably admit if we are thoroughly honest, a pathetic cynicism noticeable today throughout society, which is to be partly accounted for by our failure to move faster toward genuine political democracy. But it is even more to be explained,

we believe, because of a wholesale failure to apply in our industrial life either the spirit or methods which are consistent with our political professions.

The American tradition of democratic control, of essential public activities as public service, of the supreme worthfulness of the individual life, has been almost completely divorced from industrial developments. Industry as an institution has in a sense been in conflict with the community; the conflict has brought disappointments, fears and hates; and these have in turn brought unhappiness.

In our vast political experiment, doubtful as its concrete results may often seem, we have affirmed certain basic truths which look in the direction of that release and real liberation of human talents which seem to be a condition of human happiness. We have to that extent made significant progress.

We have affirmed the unique value of personality.

We have believed that liberty, equal opportunity and a fraternal attitude were necessary conditions of that self-development which gives quality and richness to each individual life.

We have professed that in the common life of a democracy there can be no peace or sanity or improvement in the quality of life unless a motive of public service is dominant in the administration of those affairs which affect all the people. At heart we are convinced that when there must be organized activity in the community to provide for primary human needs, that organized effort should be in the public interest and constitute in fact as well as in name, a public service.

We might even, if our thinking were resolved into fundamental terms, be prepared to admit that the purpose of the state is to afford a "good life" for all individuals in the state.

But in industry we have little progress of this sort to record. There is rather confusion and ill will and strife. For in industry there has been as yet too little acceptance of the value of human life as an end in itself; too little liberty and equal status; too little recognition that our economic life really constitutes the most significant public service of our generation.

And most fundamental of all, there has been too little understanding that if the purpose of the community's organized life is to minister to the good life of all individuals in it, there must be some attempt to achieve a good life in that major part of the citizen's time which is spent in earning his daily bread.

In short, in the administration of its human affairs industry

lacks standards. It lacks any clear agreement as to what all its own turmoil and sweat and anxiety are for. It lacks a criterion in the light of which its own efforts can be evaluated.

The hope for our industrial future—the hope that it can be productive, joyous, contributive to the life of every member of the community—appears, therefore, to lie in our ability to make its practices square with our historic political faith. Our hope lies in the release of positive, creative impulses in all our people in and through their work; in a wide recognition that industry can be public service if we will only make it so.

As soon, then, as agreement can be reached among the interested groups that industry is for service and that this service must be rendered in a way consistent with the development of individual personality, a tremendous step will have been taken toward a purpose at once scientific and human. Standards and criteria will begin to emerge; and a sense of direction will be restored. Study of wise methods will go rapidly forward and fertile results will be forthcoming. We shall have supplied for industry the purpose and the methods which it needs to bring it into harmony with the professions of a democratic country.

Such agreement on purpose and methods on any wide scale may be a long way off. But there are evidences of a new outlook, a new purpose, a new determination to harmonize the aims of our industrial life with those political aspirations of America which are at bottom lofty and spiritual because they are democratic and intensely human. And happily those evidences come not from one group in society but from all.

A prominent engineering consultant, for example, has recently affirmed that: "We have proved in many places that the doctrine of service which has been preached in the churches as religion is not only good economics and eminently practical, but because of the increased production of goods obtained by it, promises to lead us safely through the maze of confusion into which we seem to be headed, and to give us that industrial democracy which alone can afford a basis for industrial peace."¹

A progressive capitalist like the younger Mr. Rockefeller adds his testimony: "The day has passed when the conception of industry as chiefly a revenue producing process can be maintained. To cling to such a conception is only to arouse antagonisms and to court trouble. In the light of the present, every thoughtful man must concede that the purpose of industry

¹ GANTT, HENRY L. *Organizing for Work*, p. 104.

is quite as much the advancement of social well-being as the accumulation of wealth.”¹

The trade unions of England in a recent appeal to their government are clear that: “It is not enough merely to tinker with particular grievances or to endeavour to reconstruct the old system by slight adjustments to meet the new demands of Labour. It is essential to question the whole basis on which our industry has been conducted in the past and to endeavor to find, *in substitution for the motive of private gain*, some other motive which will serve better as the foundation of a democratic system. This motive can be no other than the motive of public service, which at present is seldom involved save when the workers threaten to stop the process of production by a strike. *The motive of public service* should be the dominant motive throughout the whole industrial system, and the problem in industry at the present day is that of bringing home to every person engaged in industry the feeling that he is the servant, not of any particular class or person, but of the community as a whole. This cannot be done so long as industry continues to be conducted for private profit, and the widest possible extension of public ownership and democratic control of industry is therefore the first necessary condition of the removal of industrial unrest.”²

And, finally, a group of English employers have made the prophetic declaration that:

“It sounds across the whole industrial arena, the trumpet call of a new idea—the conception of our industry as a great self-governing democracy of organized public service.

“We have endeavoured, we hope successfully, to outline the true foundation for such a consummation, namely:

“Freedom and security for initiative and enterprise.

“Complete removal of the fear of unemployment.

“Salaries to management commensurate with ability.

“Hire of capital at the market rate of good securities.

“Provision of common services controlled by the whole industry, and financed from its surplus earnings.

“We have not hesitated to make great demands, for the emergency and the opportunity are also great, and this is no time for dalliance.

¹ ROCKEFELLER, J. D., JR. Representation in Industry, *Annals*, American Academy of Political and Social Science, January, 1919, p. 168.

² *The Survey*, May 3, 1919, p. 228.

"We believe that the spectacle of organized management and labour, uniting their constructive energies upon a bold scheme of reorganization and advance will transform the whole atmosphere of our industrial life, and that the force of a great example is the only thing that will lead the way to the commonwealth that all men of goodwill desire."¹

But industry for use and service means industry for the development of the citizens in industry. Industry to be fundamentally serviceable must also be adequately self-expressive. The two aims, service and personality, are really complementary—two ways of expressing the central truth that industry justifies itself to the extent that it ministers to man as a producer no less than as a consumer. At the center of all values in industry stands the precious, unique value of each individual personality in the community. And it is precisely because each personality is uniquely precious that only in a democratic society and in a democratic industrial organization can he find self-expression and secure the medium for his development.

The democratic tendency in industry is today not embodied in any one form or type of structure. It is rather gaining expression wherever opportunity is being given for individual life to take on the richness, interest and joy that are rightfully native to it. Methods of representative control are thus only a means—but apparently an essential means—to ends which are completely personal. We want representative machinery not for its own sake, but because it is the only machinery in the intelligent use of which personal development results.

It is, we believe, in the light of such principles and considerations as these that industrial practices are to be intelligently discussed and weighed. And it is happily true that those methods are gaining in favor and showing their practical success, which are best harmonizing the claims of industrial productivity with those of human personality.

What professional managers must more and more seek, therefore, in order to reconcile these two vital ends, is an organization within factories and within industries which brings closer to realization the conception of each industry as a great self-governing democracy of organized public service.

¹ Interim Report of the Committee on Scientific Management and Reduction of Costs, on Organized Public Service in the Building Industry, submitted to the Industrial Council for the Building Industry (Great Britain).

APPENDIX

Topical Outline for Guidance of Students in Visiting Personnel Departments

- I. The Status of the Personnel Department
 - A. Is it centralized?
 - B. Extent of authority and responsibility
- II. Organization of the Personnel Department
 - A. General features
 1. Reasons for installing
 2. Number years in operation
 3. Physical lay-out of offices
 4. Staff required
 - B. Method of organization
 1. Title of person in charge
 2. To whom responsible?
 3. Appropriation
 4. Staff required
 5. System of files, records and forms
 - C. Functions
 1. Employment
 - (a) Plant requirements
 1. Working force, total, peak, seasonal
 2. Types of people hired through department
 3. Sources of supply
 - (a) Outside of plant
 - (b) Within the plant
 4. Method of requisition
 - (b) Method of selection
 1. Questions and tests used
 2. Restrictions, standards, job specifications
 3. Extent of foreman's or superintendent's responsibility
 4. Obligation to applicant
 - (a) Explanation of plant policies, conditions of work and pay
 - (b) Information booklet
 5. Introduction to the plant
 - (a) To other employees
To foreman
 - (b) Explanation of job
 - (c) "Follow up" to determine success of selection
 - (d) "Follow up" to determine transfer, promotion, discharge

2. Factory hygiene
 - (a) Fire prevention and protection
 1. Policies as to
 - (a) Reduction of hazards to life
 - (b) Cooperation of employees
 - (c) Fire drills
 2. Responsibility for inspection and maintenance
 - (b) Accident prevention and protection
 1. Policies as to mechanical safeguards, first aid, etc.
 2. Responsibility for inspection and maintenance
 3. Records of causes
 4. Cooperation of employees through
 - (a) Education, suggestion systems, committees
 - (c) Maintenance of plant
 1. Responsibility for periodic check up, and recommendations for improvement in
 - (a) Working hazards
 1. Occupational hazards
 2. Ventilation and heating
 3. Removal of air impurities
 4. Lighting
 5. Noise and vibration
 6. Postures as adapted to work
 7. Rest periods
 8. Purity of drinking water
 9. Hot and sufficient food
 - (b) Factory housekeeping: Windows, wash-rooms, floors, bubblers, etc.
 - (d) Medical care
 1. Who is responsible for, what facilities are there and who pays the cost of
 - (a) First aid
 - (b) Nurses, doctors, hospital, dental department
 - (c) House visits
 - (d) Fatigue study
 - (e) General health educational policy
3. Training
 - (a) Job instruction
 1. For workers
 2. For foremen
 3. Methods of instruction
 - (b) Policies in regard to
 1. Technical training for advancement
 2. Education in maintaining factory standards
 3. English classes
 4. General educational features
 5. Responsibility for conducting above
 - (c) Transfer policy

- (d) Promotion policy
- (e) Suggestion system
- 4. Miscellaneous service functions
 - (a) Physical
 - 1. Lunch rooms—(financial policy, extent of use)
 - 2. Cooperative purchasing arrangements
 - 3. Transportation facilities
 - 4. Housing schemes
 - (b) Educational
 - 1. Libraries, lectures, movies
 - 2. Plant paper
 - (c) Recreational
 - 1. Variety; facilities
 - 2. Method of organization and control
 - (d) Benefit associations
 - 1. Savings societies
 - Purpose, method of operation, responsibility for funds
 - 2. Insurance associations
 - (a) Type
 - (b) Methods of operation
 - (c) Qualifications for membership
- 5. Maintenance of working force and amicable joint relations
 - (a) Problems where mutual understanding, cooperation or careful adjustment are necessary
 - 1. Promotion
 - 2. Transfer
 - 3. Grievance
 - 4. Discipline or shop control
 - 5. Discharge
 - 6. Interview of leavers
 - 7. Adjusting pay errors
 - 8. Determination of policies on working conditions
 - (a) Working methods
 - (b) Quantity and quality of output
 - (c) Hours of work
 - (d) Rate of pay
 - (b) Methods for controlling these problems
 - 1. Through personnel manager
 - (a) Is there stated procedure for handling complaints and grievances?
 - 2. Employees' committees
 - (a) Qualification for membership
 - (b) Machinery for representation and election
 - (c) Method of organization
 - (d) Problems handled
 - 3. Collective bargaining with organized labor
 - If there are agreements
 - (a) What are their terms?

- (b) Are they satisfactory?
 - 4. Plant history on strikes and lockouts
 - 6. Research
 - (a) Responsibility for gathering and classifying information as to
 - 1. Jobs offered, types and specifications
 - 2. Workers needed, types and qualifications
 - 3. Effect of job on worker
 - 4. Tardiness and absenteeism
 - 5. Labor turnover
 - (a) How figured
 - (b) Amount of
 - (c) Causes of
 - (d) Cost of
 - (b) Labor audit of plant
 - (c) Method of learning of new developments in whole personnel field
 - 7. Relation of department to other staff departments
 - (a) How are personnel policies adopted?
 - (b) Are production and sales policies adopted with knowledge of personnel department?
 - (c) How are personnel policies put into effect with foremen?
 - 8. Relation of department to outside agencies
 - (a) Responsibility and method of keeping in touch with
 - 1. Legislation
 - 2. Court decisions
 - (b) Policy as to contacts and cooperation with
 - 1. Government bodies, health departments, employment service, schools, libraries, etc
 - 2. Civic agencies
 - 3. Business associations
 - 4. Organized labor
- D. Conclusion
- (a) What do you consider the main justification for your department?
 - (b) What do you consider its limitations?

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